

THE MILLING WORLD

AND

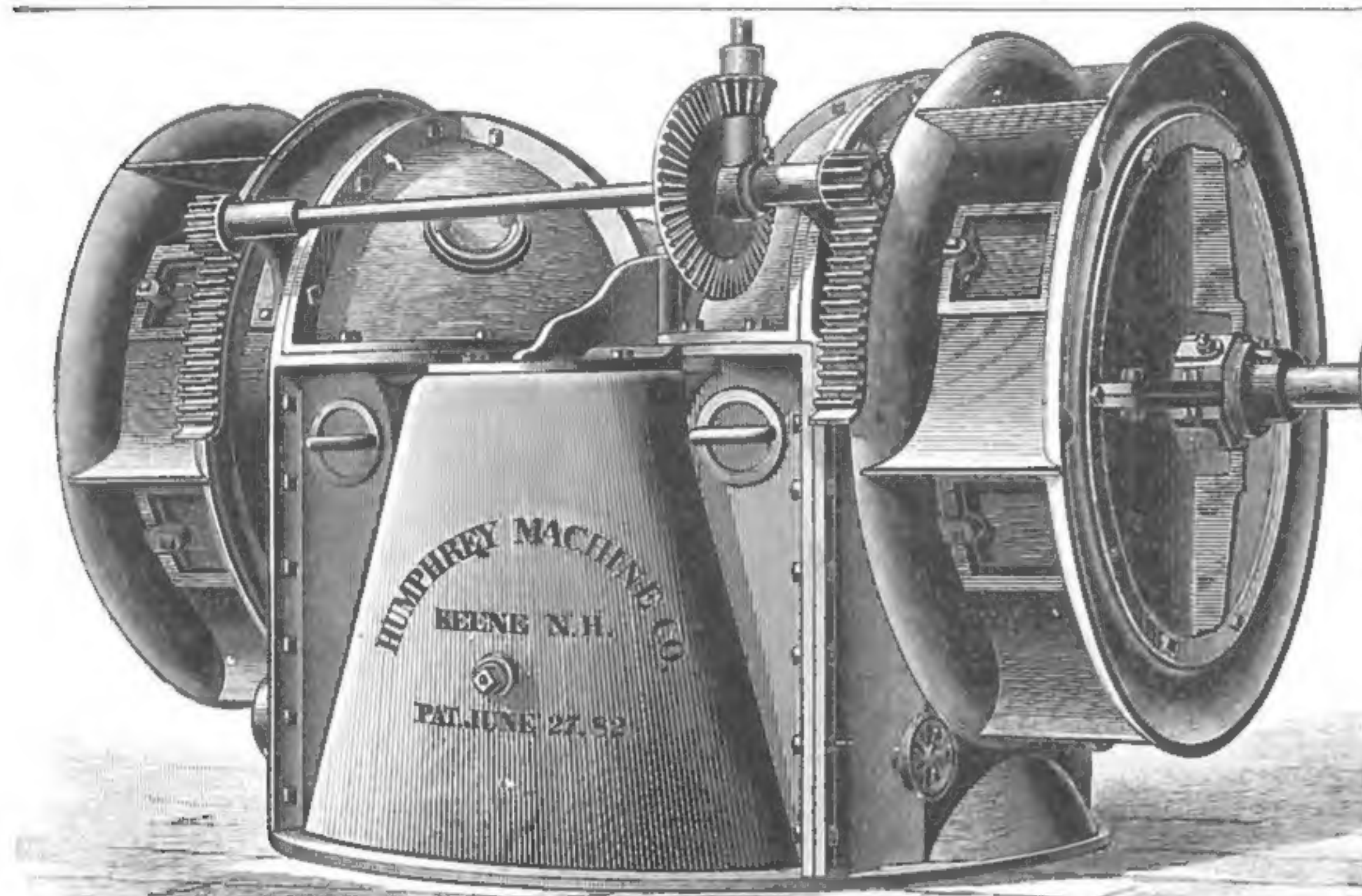
CHRONICLE OF THE GRAIN AND FLOUR TRADE

PUBLISHED EVERY MONDAY MORNING.

VOL. XXII. No. 18.

BUFFALO, N. Y., JUNE 30, 1890.

\$1.50 PER YEAR.



THE X-L-G-R OR IMPROVED CIRCUMSHOT

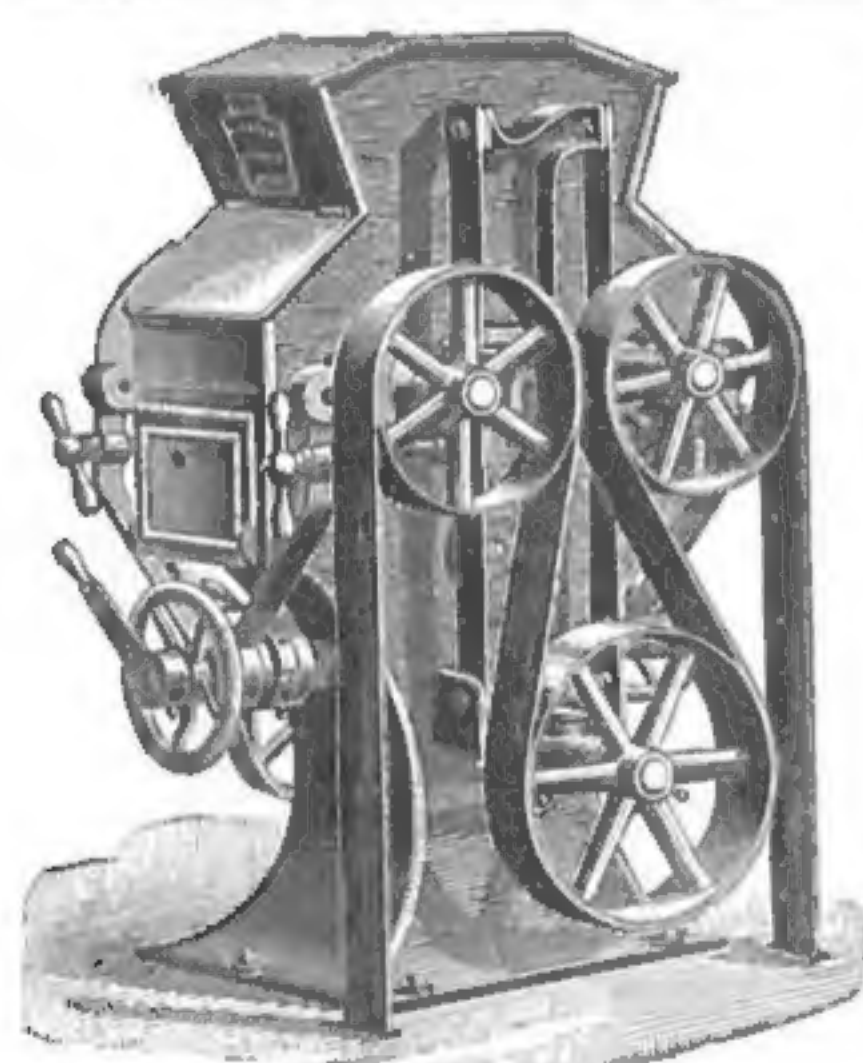
Water Wheel

On Horizontal Shaft. Saves cost, annoyance and loss of power incident to use of gears. Affords more available power from water applied at full or part gate than any other. The cheapest, best and most desirable Water Wheel yet produced.

EFFICIENCY, ECONOMY and EXCELLENCE FULLY GUARANTEED.

Humphrey Machine Co

KEENE, - - N. H.



'KEystone' 4-ROLLER MILL.

SHORT SYSTEM FLOUR MILLS.

Unparalleled Results.



By the "Keystone" Roll Grinder, Manufactured by Ourselves. The only machine that will Grind Rolls Absolutely True.

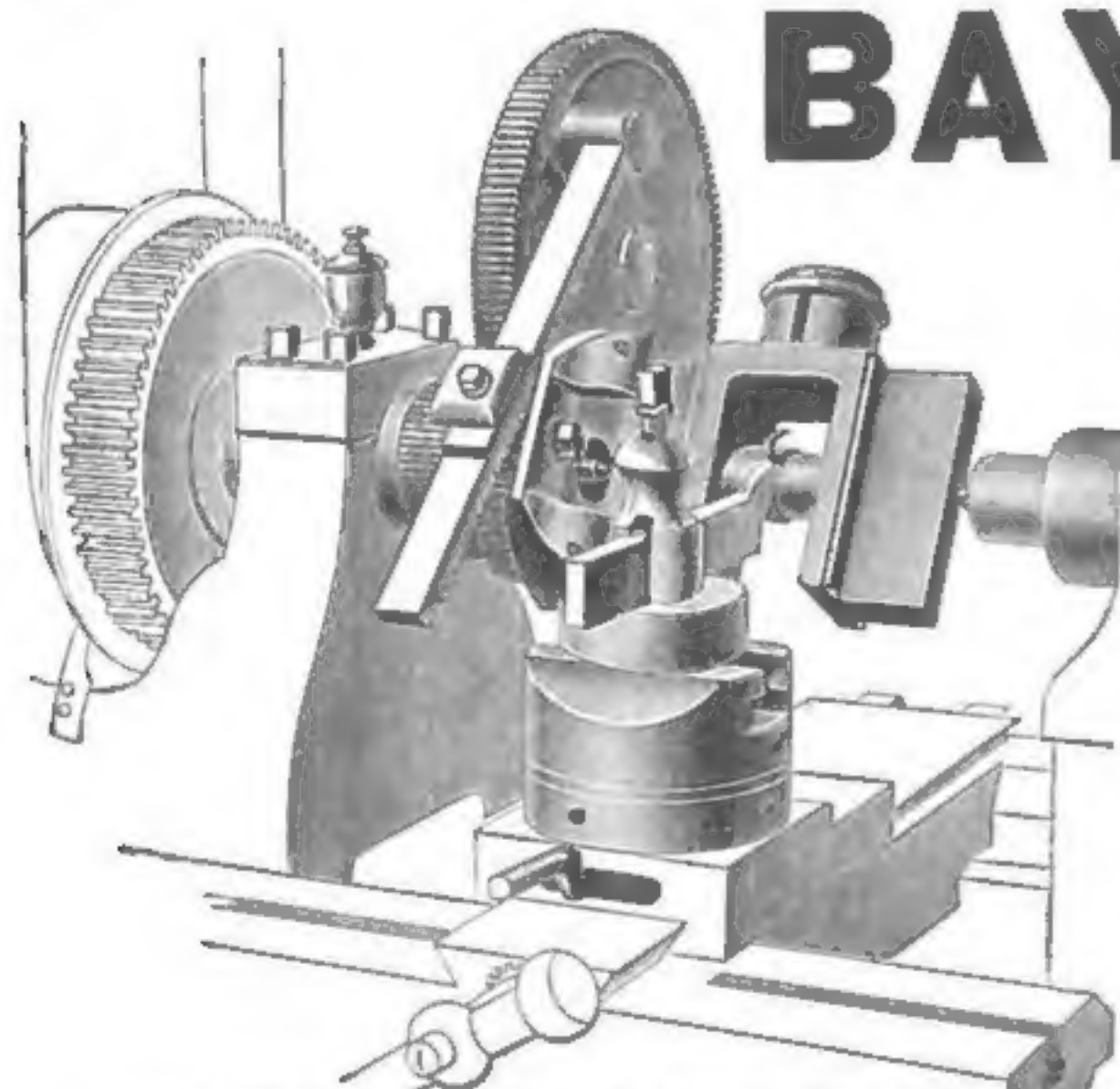
ADDRESS THE J. B. ALLFREE CO., 76 to 78 Shelby Street, INDIANAPOLIS, IND.

BAY STATE IRON WORKS

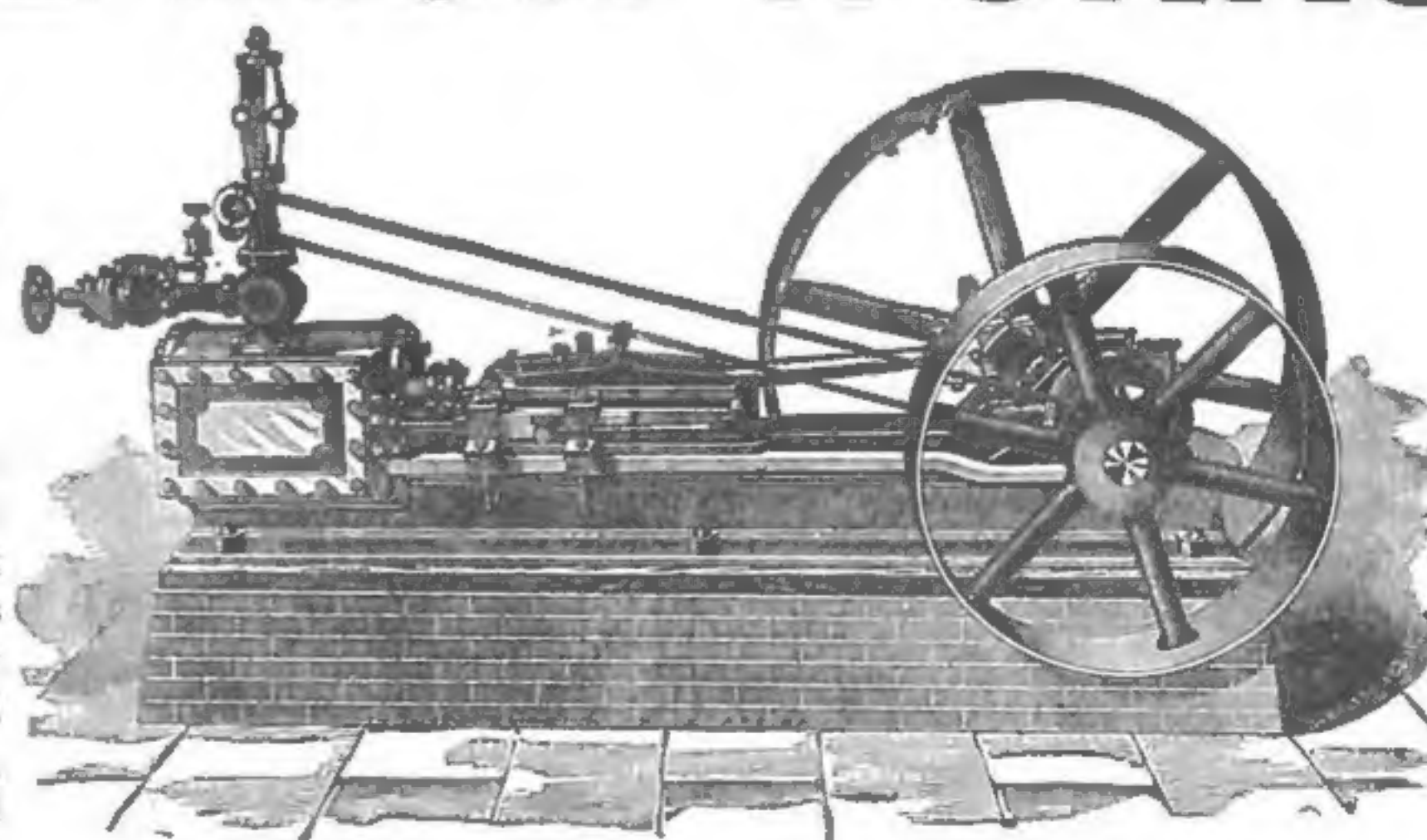
—Manufacturers of—

Engines, Boilers,
—AND—
HOISTING MACHINES.

Also the Patent Cross-Head Machine and Acme Cube Pipe Tongs. We make either Center or Side Crank Engines, on same bed. Make engines from 5 to 250 Horse-Power. Have over 3,500 Engines and Boilers and over 1,000 Hoisting Machines in use, and all giving good satisfaction. Send for Catalogues and Prices.



PATENT CROSS-HEAD MACHINE.



IMPROVED DETACHABLE CENTER-CRANK ENGINE.

Noble & Hall, Box 462, Erie, Pa.

OFFICE OF CASE MANUFACTURING COMP'Y COLUMBUS, OHIO.

The Case Roller Mills. Over 14,000 Pairs in Use.

PLEASE READ OUR DESCRIPTION OF THEM, EVERY STATEMENT OF WHICH IS ABSOLUTELY TRUE.

PLEASE READ WHAT MILL OWNERS SAY ABOUT THEM.



The accompanying cut is a correct illustration of our latest improved Four Roller Mill. For fine work, great durability, simplicity, and general excellence, they stand "head and shoulders" above all others.

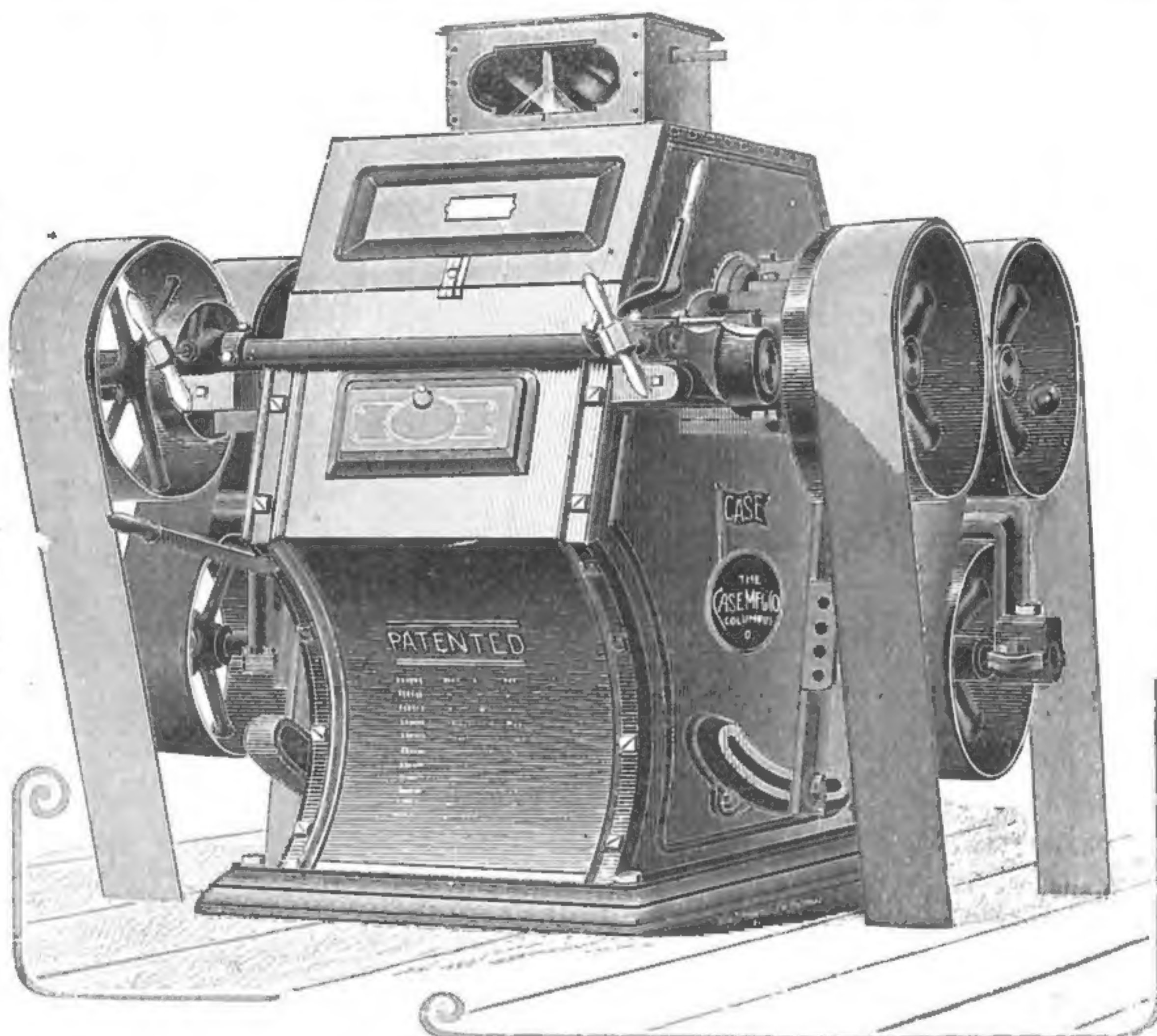
The frame is of iron with a heavy iron base.

The wood-work in top is of select cherry and black walnut, carefully shellacked and varnished.

The handles of adjusting screws and levers are finely nickel plated.

The joints are tight and dustless.

The adjustments easy, simple and perfect.



The roll bearings are wide and finely babbitted.

The belt drive is positive—no little short belts to slip.

The door for examining stock is a great convenience.

The arrangement for leveling rolls, simple and accurate.

The rolls can be thrown apart their entire length by one movement of the lever, and brought back again to original position, requiring no re-setting or experimenting.

Each machine is provided with our AUTOMATIC VIBRATING FEED, which requires no attention, and never fails to spread the feed the entire length of the rolls.



Please Read These Testimonials.

LITCHFIELD MILLING CO., MANUFACTURERS OF FLOUR. }
LITCHFIELD, ILL., Sept. 14, 1889.

Case Manufacturing Co., Columbus, Ohio.

GENTLEMEN: We are in receipt of your favor of the 11th inst., and in reply would say we have twenty CASE AUTOMATIC FEEDS on our Dawson and Allis Rolls, and we are greatly pleased with them. We have tested the Feeds thoroughly on different materials, and find they work as well on bran and germ and other soft materials, as they do on middlings. We have derived great benefit from the use of them, and can cheerfully recommend them to the milling fraternity. Yours truly,

J. C. EDWARDS, General Manager.

OFFICE OF A. J. MILLER, PROPRIETOR WHITE ROSE MILLS. }
DEALER IN FLOUR, GRAIN AND MILL FEED. }
METAMORA, IND., Nov. 19, 1889.

Case Manufacturing Co., Columbus, Ohio.

GENTLEMEN: Your Feed arrived O. K., and placed it in working order in a very short time. You have furnished me a daisy Feed. After regulating your Feed, it needs no more attention. It pays for itself in one week over the "Roller Feed" in cleaning up the

stock, and also insuring the superiority at same time. I forward you the amount of bill. Yours truly, A. J. MILLER.

TREZEVANT, TENN., Feb. 27, 1889.

The Case Manufacturing Co.

GENTLEMEN: We have five double stands of Rolls with Roller Feeds on all of them. A short time ago one of your agents induced us to try one of your Automatic Shaker Feeds. We find that it works much better than the Roll Feed, distributing the material the whole length of the Roll. We heartily recommend your feeds to any one wishing to put in new machinery.

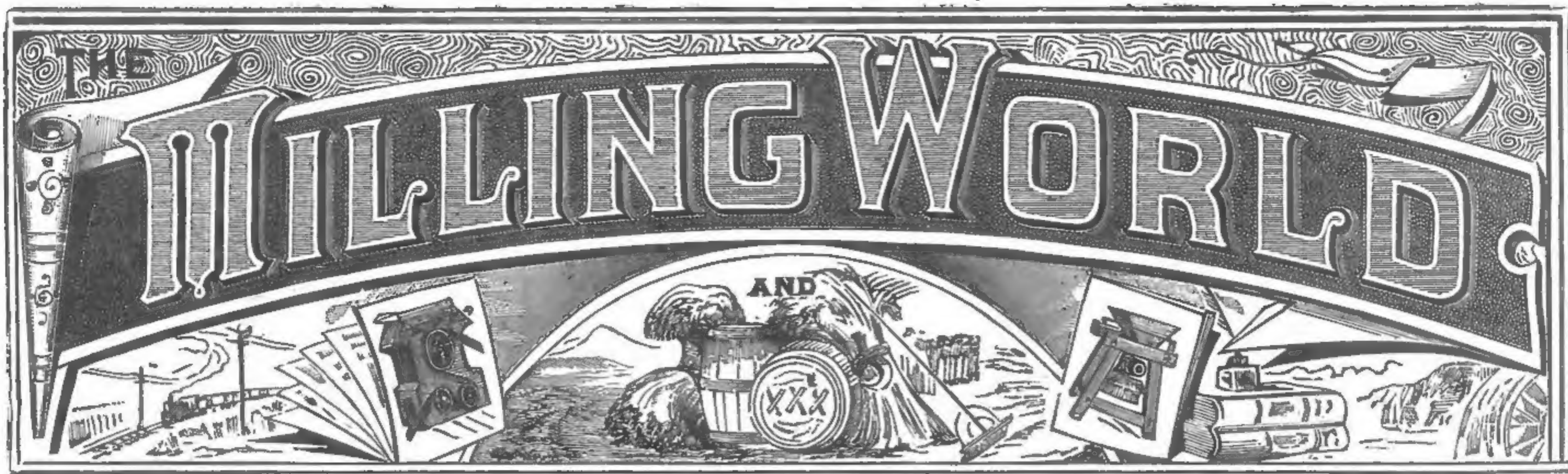
Respectfully yours, FUQUA, HARRIS & CO.

W. C. MANSEFIELD & CO., MERCHANT MILLERS. }
CLEVELAND, TENN., Aug. 29, 1889.

Case Mfg. Co., Columbus, O.

GENTLEMEN: If we were to build a hundred mills, we would not permit any other than the "CASE ROLL" to enter them. They are the best roll on earth. Yours truly,

W. C. MANSEFIELD & CO.



CHRONICLE OF THE GRAIN AND FLOUR TRADE

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THE Minneapolis convention of the "National" was wholly devoted to export matters, even more than had been expected. Milling was totally ignored. Not an idea on the subject of flour-making found expression in the meetings. Yet the association calls itself a "millers' association."

OUR Milwaukee cotemporary shows a burning desire to keep up a sympathetic vibration between itself and the Minneapolis "Yahoo" that would be amusing, if it were not so pathetic. It seems to be the only journal in the field that cares a rush for the opinion of the "Yahoo." The Milwaukee journal ought to sell its sympathetic vibration to Keely. It might enable him to make his motor mote. Surely it can never make the "Yahoo" either sane or decent.

THE snapping, snarling Minneapolis "Yahoo" refers to the papers devoted to the interests of millers as "mongrel milling journals." All the same there is not one of the older milling journals that does not have a larger circulation among millers than the "Yahoo" has. The crazy egotists of the "Yahoo" have catered to the brokers and speculators and neglected the millers, and the millers in turn have neglected the "Yahoo." The real milling journals of the country do not care a rush for the "Yahoo."

PRIME writes: "With the third week in June the country has a fair stand of corn, but nothing like as good as the one made in 1889." That settles it. If Prime says a thing, the opposite is bound to come true. We shall now expect to see the beggarly 2,000,000,000-bushel corn crop of 1889 buried under a 4,000,000,000-bushel crop in 1890. With Prime "agin" a crop, the crop is sure to be a bouncer. Why do not the Delaware peach-growers engage Prime to predict gloomy things about the peach crop? In that way they would be sure of "dead loads" of peaches every season.

IMMIGRATION during the present fiscal year makes us tired as prophets and patriots. When this year opened, we were led by the indications to predict that immigration would fall far below the notch of last year. That was prophecy. During the first eleven months of this year the total number of immigrants was 401,609, against 392,560 in the corresponding period a year ago. That is the event. We are a failure as a prophet. The only other failures in the prophet line at all equaling our failure in the prophet business, which we can recall, are Prime on crops, Wiggins on earthquakes and General Greeley on weather. We hereby abandon prophecy forever. A prophet is an unprophetable thing, any way!

POSSIBLY the failure of the Millers' National Association to get the bill-of-lading question definitely and satisfactorily settled is owing to the knowledge of the steamship companies concerning the real status of the association. They may know thoroughly well that the association merely represents itself, and that it no more represents the mass of millers in the United States than it represents the Czar of Russia. If there was a really "national" association of millers in the United States, a body including representatives from every State and Territory, strong in numbers

and working harmoniously in all essentials, it would exercise a power that can never be exercised by the present organization. When the "National" speaks, it is ridiculous in the eyes of steamship managers and other men engaged in transportation, for they know that it is a close corporation seeking its own benefit, and doing so under a most inappropriate name. In the nature of things the name "National" is not a thing to conjure with powerfully, and the carriers will doubtless continue to ignore the association as thoroughly in the future as they have ignored it in the past.

WHAT is the "aggregate capacity" of the flouring-mills of the United States? There are about 17,000 mills in the country. Allowing an average capacity of 20 barrels a day, and running the mills the whole year, these 17,000 mills would be able to grind in 365 days the grand total of 124,100,000 barrels of flour, calling for 620,000,000 bushels of wheat. Allowing the average production to be 30 barrels a day, their yearly capacity is 186,150,000 barrels of flour, calling for 930,750,000 bushels of wheat. At 40 barrels a day the output would be 248,200,000 barrels a year, calling for 1,241,000,000 bushels of wheat. In view of these astounding figures the question of capacity assumes at once a direct and forcible bearing upon the whole milling situation, and a study of the relations of cause and effect, of supply and demand, and of over-production and its correlative, under-consumption, may lead some of those most directly interested in milling to look farther and deeper for the explanation of the "depression in milling" of which so much is said and written. It may be possible, as the Millers' National Association mismanagers assert, that the whole difficulty lies in the export trade and the encumbrances and restrictions placed upon it, but, when the enormous capacity of the mills already existing is considered, not only in the United States, but in Great Britain and European countries as well, and when the limited supply of wheat in the world is added to the consideration, the question goes entirely out of the reach of the bill-of-lading and jute-bag factors. We have only to give the mills in the United States an average daily capacity of about 70 barrels to enable them to grind the wheat product of the whole world. From this it is plain that there is a decided lack of balance in the factors. 1. The crop of wheat in the world is about 2,000,000,000 bushels a year. 2. The wheat-eaters number probably 400,000,000. 3. The flour-makers have mills enough to grind anywhere from 3,000,000,000 to 7,000,000,000 bushels, or even more in a year. With a regular supply of wheat and a regular number of consumers, the surplus of milling capacity necessarily tends to favor the consumer. Five mills working where one or two can do all the work mean competition that is not altogether wholesome for the competitors, and that is just what ails milling to-day in the United States and elsewhere. To attempt to remedy evils so radical in their nature and so far-reaching in their effects by resolutions in conventions is absurd. The purblind members of the Millers' National Association and all foreign associations will be able to appreciate the situation more thoroughly when they shall have become accustomed to seeing through the millstone as far as the hole goes.

The DAWSON ROLL WORKS CO.

FOUNDERS & MACHINISTS,

—MANUFACTURERS OF THE—

Dawson Roller Mills

—AND FURNISHERS OF—

CHILLED IRON ROLLS

WITH DAWSON PATENT CORRUGATION.

ALL STYLES OF FLOUR MILL ROLLS RE-GROUND AND RE-CORRUGATED WITH ANY FORM OF CORRUGATION.

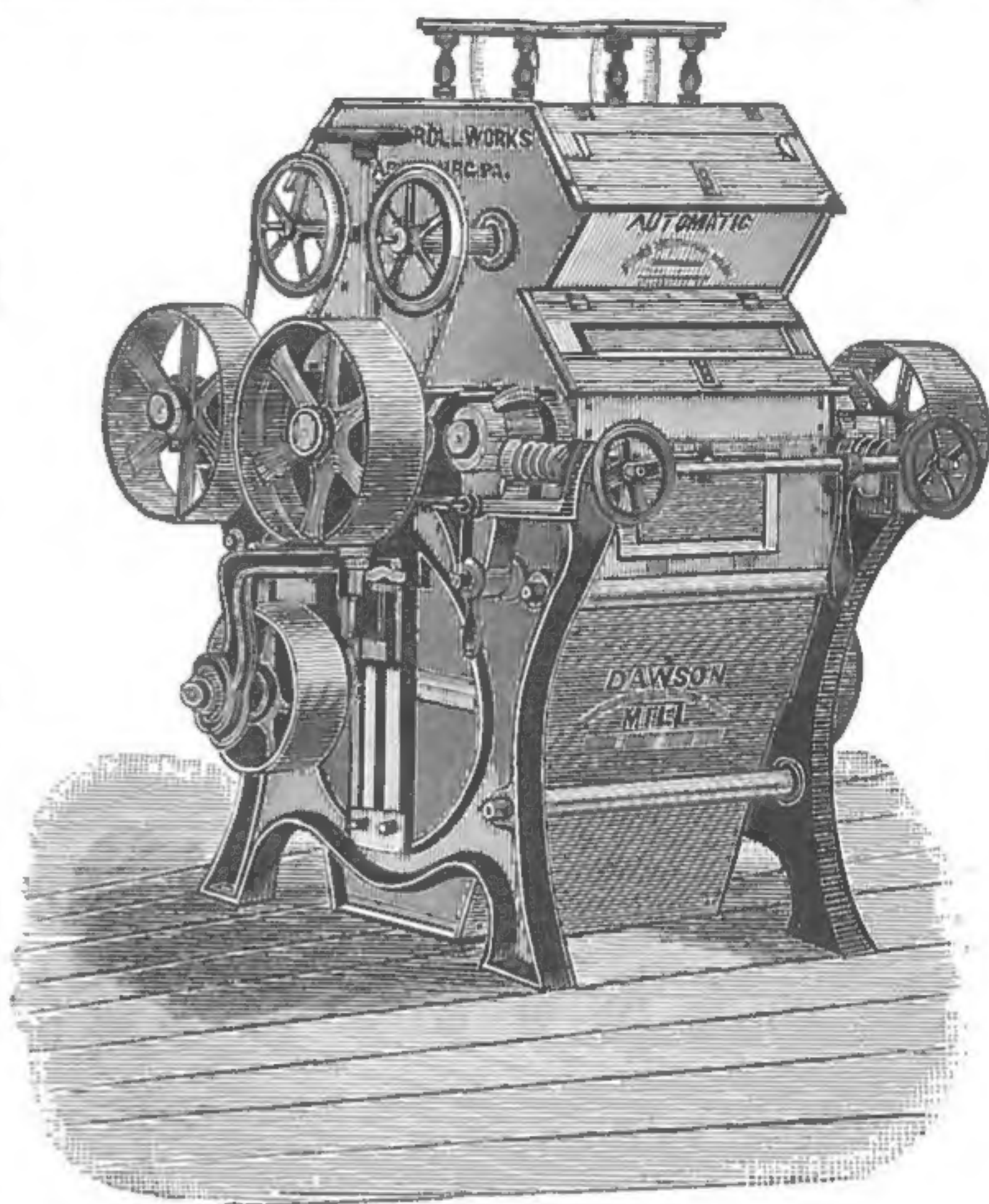
We have had large and extended experience in grinding and corrugating chilled rolls for milling, and have one of the largest and most improved plants in the country for this work, which enables us to meet the most exacting requirements of the trade promptly.

ORDERS AND CORRESPONDENCE SOLICITED.

DAWSON ROLL WORKS CO.

South and Short Streets,

HARRISBURG, PA.



The Cowles "Reliable" Sectional Wood Pulley



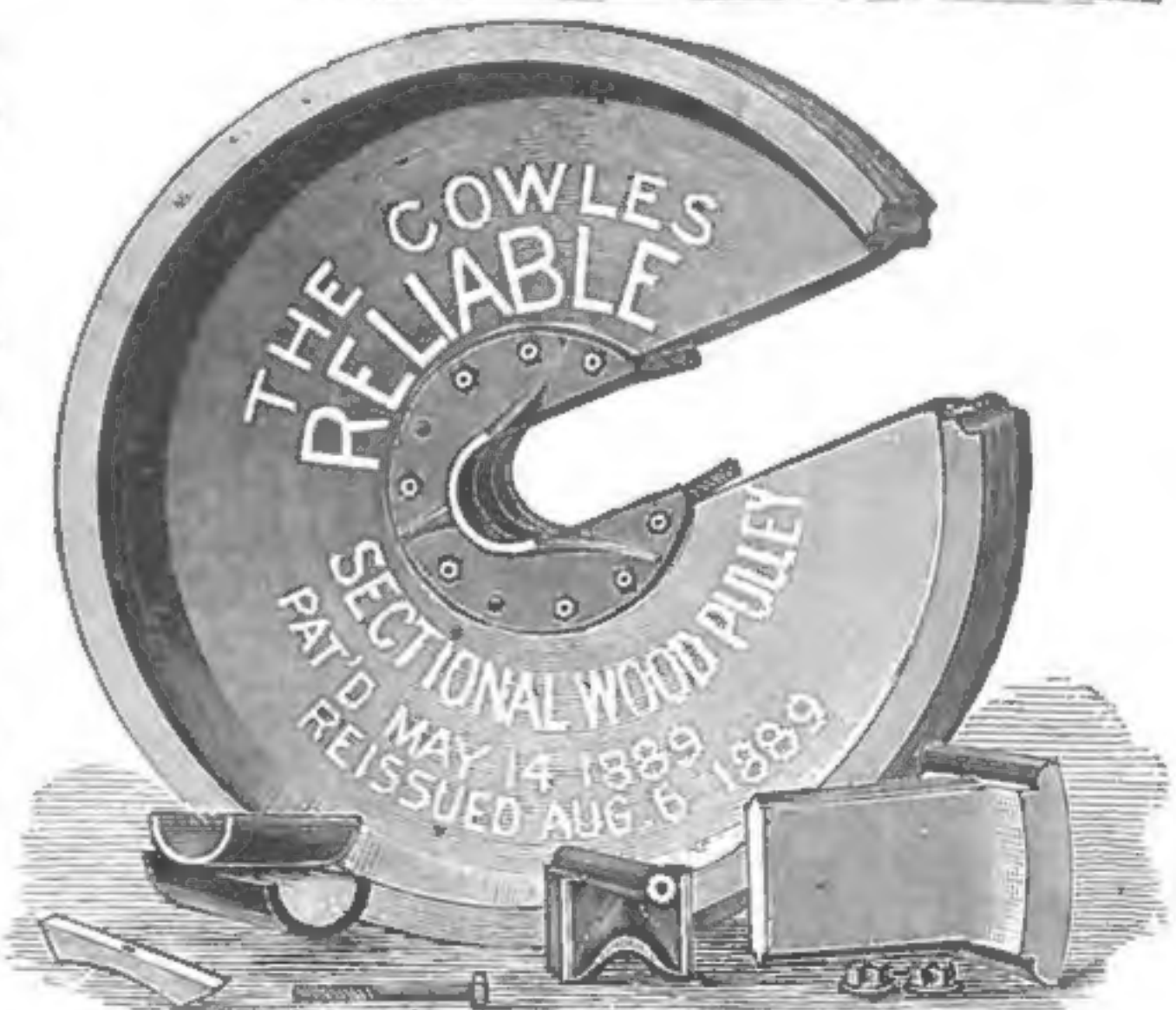
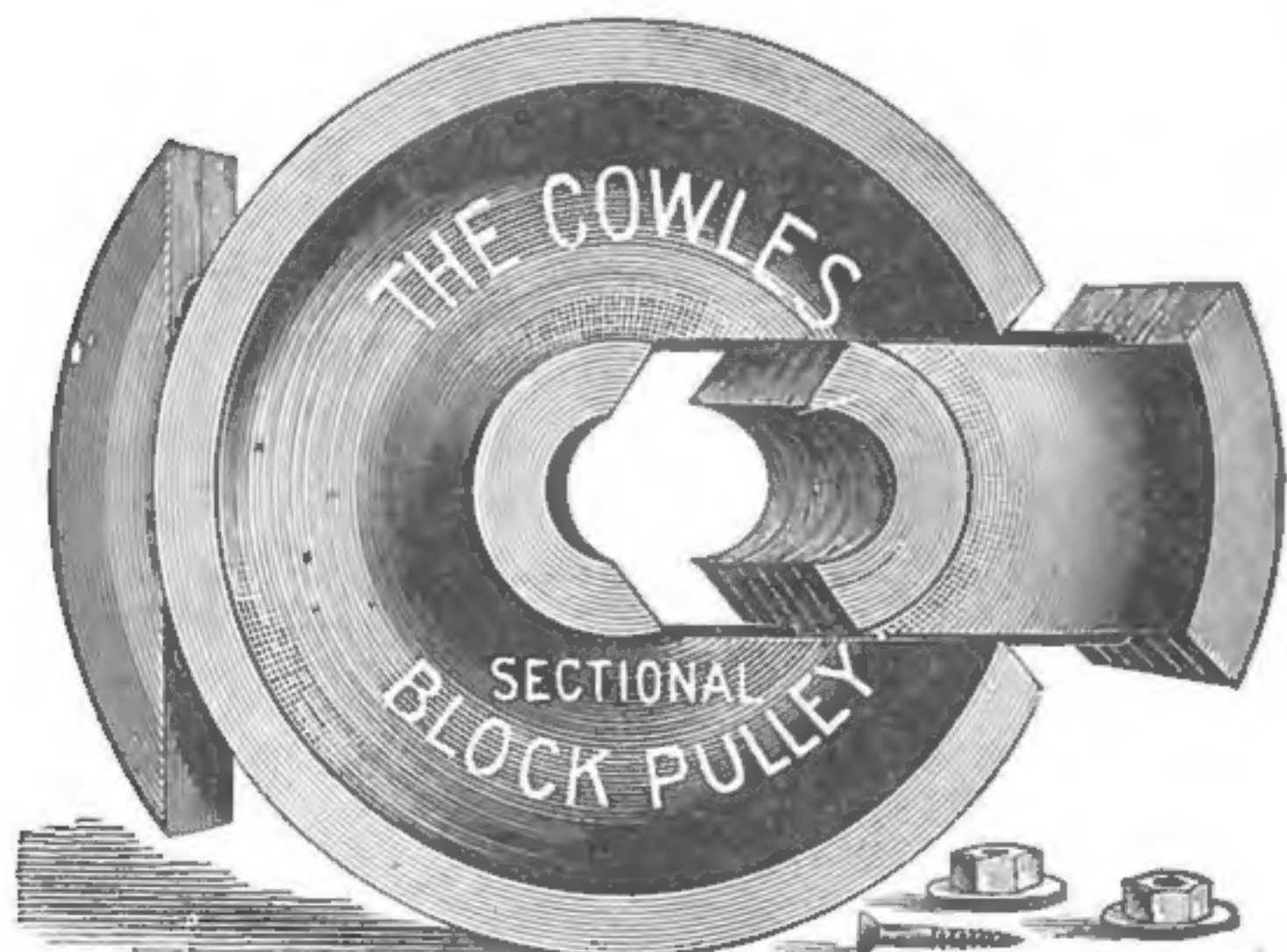
Web made of several layers glued together with grain crossing, and faced up on both sides. Iron flanges securely bolted to web. Rim put on after web has been trued up. Web and rim turned on inside and face, making perfect running pulley. Rim supported entire circumference. Positive self-gripping device for securing pulley to shafting, which is self-centering, and can not slip with wear.



A wooden rim pulley transmits from 30 to 50 per cent more power with same belt than an iron one.

Two-thirds lighter than iron, bearings will wear longer and the expense for lubricant will be less.

Having solid web, there is no air resistance. The "Reliable" can be placed on shaft or position changed in one-fourth the time required with any other pulley.



EDWARD GERMAIN, SOLE MANUFACTURER, SAGINAW, MICH., U.S.A.



PUBLISHED EVERY MONDAY. OFFICES: { Corner Pearl and Seneca Streets,
Over Bank of Attica.
McFAUL & NOLAN, - - - PROPRIETORS.
THOMAS McFAUL, JAMES NOLAN.

SUBSCRIPTION.

In the United States and Canada, postage prepaid, \$1.50 Per Year, in advance; remit by Postal Order, Registered Letter, or New York Exchange. Currency in unregistered letter at sender's risk.

To all Foreign Countries embraced in the General Postal Union, \$2.25 Per Year, in advance.

Subscribers can have the mailing address of their paper changed as often as they desire. Send both old and new addresses. Those who fail to receive their papers promptly will please notify at once.

ADVERTISING.

Rates for ordinary advertising made known on application.

Advertisements of Mills for Sale or to Rent; Partners, Help or Situation Wanted, or of a similar character One cent per word each insertion, or where four consecutive insertions are ordered at once, the charge will be Three cents per word. No advertisement taken for less than 25 cents. Cash must accompany all orders for advertisements of this class.

Orders for new advertisements should reach this office on Friday morning to insure immediate insertion. Changes for current advertisements should be sent so as to reach this office on Saturday morning.

EDITOR'S ANNOUNCEMENTS.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.

Correspondents must give their full name and address, not necessarily for publication, but as a guarantee of good faith.

This paper has no connection with a millfurnishing house and aims to represent the trade without prejudice, fear or favor.

Address all communications

THE MILLING WORLD,
BUFFALO, N. Y.

Entered at the Post Office, at Buffalo, N. Y., as mail matter of second-class.

SITUATIONS WANTED.

Advertisements under this head, 25 cents each insertion for 25 words, and 1 cent for each additional word. Cash with order. Four consecutive insertions will be given for the price of three.

SITUATION WANTED.

Head miller with over 20 years experience want to make a change this spring. Address, A. MILLER, 67 Weaver Alley Buffalo, N. Y. 4t

SPECIAL ADVERTISEMENTS.

Advertisements of Mills for Sale or Rent, Partners Wanted, Machines for Sale or Exchange, etc., etc., cost 1 cent per word, for one insertion, or 8 cents per word for four insertions. No order taken for less than 25 cents for one insertion, or 50 cents for four insertions. Cash must accompany the order. When replies are ordered sent care of this office 10 cents must be added to pay postage.

FOR SALE

Water-power grist and feed mill for sale, at wharf and railroad, near New York. Established business, \$4,000. J. W. ATWATER, 150 Broadway, New York. 1720

VALUABLE ENGLISH PATENTS FOR SALE.

THE COCHRANE ONE BELT DRIVE.

The patents for England issued to the late W. F. Cochrane for improvements in roller mills. Address, J. V. TEETZEL, Hamilton, Ontario, Canada. 1816

FOR RENT.

Clinton Mills, at Black Rock, Buffa'o, for rent on reasonable terms, recently repaired and put in good order. Apply to CHAS. DANIELS, over 811 Main Street, Buffalo, N. Y. 6tf

FOR SALE.

One of the best paying 65-barrel roller mills in Nebraska. Nearly new, and in a locality producing a big surplus of excellent wheat. Address, A. C. PUTNAM, Chadren, Neb. 1114

PARTNER WANTED.

A man with capital to take an interest in a new 50-bbl. Roller, Flour and Feed mill. First class water-power. Every thing entirely new and in first class running order. A practical miller preferred. For further particulars address BILLINGS, RED-HEAD & CO, Avoca, Steuben County N. Y. 1215

FOR SALE.

A five run stone mill, with five water-wheels. Building 40x54, with five floors. A never-failing water power on Flint River, about 200 feet from R. R. track. Property worth \$15,000. Will sell for less than half that amount. For particulars call on or address RODGERS BROS, Genesee Village, Genesee Co., Mich. 1013.

MILL MACHINERY FOR SALE.

One No. 0 Standard Combined Separator, Smutter and Brush Machine; new, best make.
One 20-Inch Under-Runner Portable Mill, French Buhr Stone, capacity 10 to 12 bushels per hour; new, best make.
One 14-Inch Vertical Feed Mill; best make, new, a bargain.
One No. 6 Dustless Separator; new, a bargain.
One No. 1 Full Rigged Combined Dustless Separator; new, a bargain.
Four Corn Cob Crushers, right or left hand, driven from above or below, best make; capacity 40 to 60 bushels per hour.
Three No. 1 Corn Shellers, capacity 200 to 300 bushels per hour; new.
One No. 2 Purifier. New. Best make. A bargain.
One 20-Inch Portable Mill.
One 18-Inch Double Gear Portable Mill.
For particulars address, FRANK SMITH, care of THE MILLING WORLD, Buffalo, N. Y. 5tf

FOR SALE, EITHER ONE CHEAP.

A circular saw planing and feed mill, 90 acres of good land, two houses, one cost \$1200, best water power in county. 42 H. P. Turbine wheels. Three miles east of Ashtabula, O.

OR,

Short system full roller mill, capacity 2½ barrels of flour per hour, three grades. Buck wheat rig with Cranson shucker. Feed stone, &c. 40 H. P. Erie engine; locomotive boiler, all nearly new, on Main street, Ashtabula, O., two minutes walk from Post Office. Big retail trade. For particulars enquire of L. B. HOWARD, Ashtabula, Ohio. Box 488. 1016

WE note with considerable surprise that the British milling journals continue to exist, notwithstanding the painful fact that Editor Cawker disapproves them.

DISCOURAGING indeed it must be to the members of the Millers' National Association to learn that individual shippers of grain and flour can force from the railroads a recognition that is coolly and persistently denied to the demands of the association! Evidently it is a damage to a shipper to belong to the association.

NOTICE the new advertisement of Messrs. Cutter and Wood, 35 Arch street, Boston, Mass., which appears in this number of THE MILLING WORLD. Their French buhr-stone cement, for the filling of seams and cavities, will directly interest every owner of a buhr. Millers will do well to address them for their latest catalogues and price-lists.

It must have made even the Minnetonka muskallonges smile to hear 40 or 60 flour exporters in Minneapolis call themselves "the millers of the United States in convention assembled," especially when the aforementioned muskallonges recalled the fact that there are probably 20,000 real flour-makers in the United States. It was a modern edition of the three tailors of Tooley street.

THAT was a neat bit of gall on the part of President Greenleaf when, in his address to the convention, he said "this large attendance shows that a majority of the millers of the country realize the importance of an organization and the large amount of good that can be done." It is a cool assumption, to say the least, to claim that 200 or 300 millers represent "a majority," when the total number of millers in the country is set down at over 17,000 for the lowest, and at 21,000 for the highest, estimate.

THE convention in Minneapolis was said to "represent a daily capacity of 142,000 barrels of flour." That would mean that the mills represented could, by running 24 hours a day and 365 days in the year, grind 51,830,000 barrels of flour a year. Thus easily does misrepresentation overleap itself! The intended implication is that a convention representing a capacity of 51,830,000 barrels, out of a total product of about 75,000,000 barrels for the whole country, must be a very important convention. Applying that sort of misrepresentation to all the mills of the United States, it would be easy to show an aggregate capacity of 150,000,000 or 200,000,000 barrels a year, against a demand for 75,000,000 barrels.

SOME of the alleged portraits of some of the members of the Millers' National Association, published in Minneapolis during the convention, ought to call down libel suits on the publishers. One journal published a cut of the virile S. H. Seamans that looked as though it had been done with a gang-edger and a cold-chisel. Another one, of President Greenleaf, looked like repousse work in lead, done with a beefsteak tenderer. The handsome A. R. James, of Buffalo, was made to look like a buccaneer. Even the handsome face of Secretary Barry was transmogrified by the Minneapolis art-butchers into something wholly unlike Frank. Evidently Minneapolis is a milling center, not an art center. The Minneapolitans should confine their wood-working to saw-logs and other heavy and utilitarian things in wood. When they slop over and into the realm of art, they are likely to appear as butchers of innocent timber and caricaturists of handsome men. Let the cobbler stick to his last, and let the Minneapolitan stick to his saw, his axe and his buhr or roll.

THE NEW "NATIONAL" CONSTITUTION.

Below is given the full text of the new constitution adopted by the Millers' National Association at the Minneapolis convention. When the vote was called, the response of "yeas" was so feeble that Mr. D. R. Sparks called for a rising vote. Treasurer Seamans also spurred up the members by saying, in his usual vigorous way: "I wish that the gentlemen would express themselves in a full vote on this constitution. We have a belligerent milling press that is finding as much fault as possible with this Association, and I think it is only due to the gentlemen who have worked on this constitution for the last six months that there should be a full vote on this matter." A rising vote was taken, all but a dozen voting to adopt the constitution without discussion of the separate provisions. The document is as follows:

DECLARATION.

This Association is formed for the purpose of promoting the welfare and prosperity of the millers of the United States; for mutual protection against patent litigation; for securing uniform action in all matters affecting the general good of the trade; for correcting the abuses which hamper it, and for encouraging and building up a common union for the common good.

CONSTITUTION.

ARTICLE I.

Section 1. This Association shall be called the Millers' National Association of the United States.

ARTICLE II.

Section 1. Any person, firm or corporation engaged in milling in the United States may become a member of this Association upon signing an application for membership, wherein the name, capacity and location of the mill are correctly stated, with the understanding that said Association shall not be called upon to defend any patent suits already commenced, or any suits on machinery in the said mill which may have been obtained outside of agreements or contrary to the arrangements made by this Association, and also that said applicant accepts and agrees to the provisions of this constitution.

Section 2. Such application must be accompanied by a sum equal to \$10 for each 100 barrels or fraction thereof actual capacity per 24 hours' run of the mill or mills owned, controlled or operated by applicant. It must be delivered to the secretary, who shall present it to the executive committee at its first meeting after date of application. When application is approved by the executive committee, the applicant becomes a member of this Association, and the secretary shall issue to the new member a certificate of membership.

Section 3. Certificates of membership shall be transferable only to the successor of the owner or operator of the mill specified. No holder thereof shall transfer his certificate to any other mill of which he may become the owner or operator, except in case of removal of machinery from one plant to another, or in case of rebuilding after destruction by fire or other cause, in which cases the certificate of membership may be canceled and a new one issued, without cost, to correspond with the new mill or new location, after approval by the executive committee.

Section 4. Representation in this Association shall be upon the basis of a unit of capacity, such unit being equal to 100 barrels per 24 hours when operating to full capacity.

Section 5. In transacting the business of this Association in convention, all voting shall be by viva voce, unless a vote by capacity is demanded, in which event voting shall be by States, each State being entitled to one vote for each ten units or fraction thereof of its membership in this Association. The State vote shall be cast as the majority of the units represented in the convention from that State shall decide.

Section 6. Certificates of membership shall be issued to all mills which are represented in this Association by members in good standing at the time of the adoption of this constitution, without cost to them. All officers elected in compliance with the old constitution shall continue in office until their successors shall be chosen.

ARTICLE III.

Section 1. The administration of the affairs of this Association shall be vested in its officers, a board of directors and an executive committee.

Section 2. Each State having a State millers' organization, which is allied to this Association and embraces not less than 25 units of capacity, holding membership in good standing in this Association, shall be entitled to one representative in the board of directors.

Section 3. The directors of this Association shall be elected by their State associations at their annual meetings, and each director shall remain in office until his successor is elected or appointed, so long as his State association shall be

entitled to representation in the board of directors. In case of the resignation or death of a member of the board of directors, his successors shall be named by the State association in which vacancy has occurred. Should a State association which is entitled to representation in the board of directors fail to elect or appoint one, its members in attendance at the national convention may select their director.

Section 4. The board of directors shall meet upon the last day of each annual convention of this Association and shall elect an executive committee of five from among their number. Seven directors shall constitute a quorum.

Section 5. The executive committee shall meet at least every three months and shall be further subject to the call of the chairman of their committee or upon the written request of three members thereof. At least five days' notice shall be given to the members of the committee of such call for a special meeting. Three members of the executive committee shall constitute a quorum.

Section 6. The executive committee shall have general charge and direction of the affairs of the Association, and shall direct the secretary and treasurer in the discharge of their duties. It shall have full control of the finances of the Association and shall determine upon all points affecting its policy. It shall be empowered to order suits brought or defended, to employ legal assistance, and to make such other expenditures as its members may deem advisable for the general good of the Association. It shall have authority to order assessments from time to time and to instruct the secretary to draw on members for such assessments. It shall appoint annually a secretary at a certain fixed compensation. The chairman of the executive committee shall make a report at the annual convention of the Association to the members, showing the transactions of the committee for the year in full.

ARTICLE IV.

Section 1. The executive committee shall, at its annual meeting, appoint from among its members the following committees of one each to serve for one year:

A committee on patent litigation.

A committee on transportation.

A committee on export trade.

A committee on domestic trade.

Section 2. The committee on patent litigation shall investigate all claims for infringements brought against members of this Association, and report on the same, with advice and opinion as to the merits of the case and the policy to be pursued, to the executive committee.

Section 3. The committee on transportation shall investigate cases of unjust railway discrimination, unwarranted delays in transit, improper delivery of freight and matters affecting the shipping of flour by rail or steamer brought by members. It shall have in charge all questions as to bills-of-lading, both foreign and domestic, and shall report on such matters to the executive committee, with advice as to the proper course to pursue.

Section 4. The committee on foreign trade shall have in charge questions affecting the relations of the miller and the foreign buyer. It shall examine into cases of unjust arbitration on American flour in foreign countries brought before it by members. It shall investigate claims of millers against foreign buyers. To it shall be referred all recommendations, suggestions and complaints of foreign flour handlers regarding American flour. It shall report on such matters to the executive committee with advice as to the action recommended.

Section 5. The committee on domestic trade shall investigate and report with recommendation to the executive committee on all complaints of domestic buyers brought before it by members. It shall consider all cases of tricky and irresponsible dealers, cancellation of orders on flimsy pretexts, delays in domestic transit, brand imitations and all other matters affecting the domestic flour trade.

Section 6. The president of this Association shall be elected at the annual meeting of the Association and shall hold office for one year, or until his successor is elected. It shall be his duty to preside at all meetings of the Association and attend all meetings of the board of directors and the executive committee. He shall be an ex-officio member of both.

Section 7. The first vice-president shall be elected at the annual meeting of the Association and shall hold office for one year, or until his successor is elected. It shall be his duty to act in place of the president in his absence.

Section 8. The second vice-president shall be elected at the annual meeting of the Association and shall hold office for one year, or until his successor is elected. It shall be his duty to act in place of the first vice-president in his absence.

Section 9. The treasurer shall be elected at the annual meeting of the Association and shall hold office for one year, or until his successor is elected. He shall receive all moneys due the Association and shall disburse the same on warrants signed by the secretary and countersigned by the president. He shall make an annual report to the Association showing

its exact financial condition. He shall furnish a good and sufficient bond in such sums as the executive committee shall approve.

Section 10. The secretary shall be appointed by the executive committee and shall act under its direction.

ARTICLE V.

Section 1. The annual meeting of the Association shall be held at such times and places as shall be determined by the executive committee. Special meetings may be called by the executive committee, if in its opinion circumstances require them. The executive committee shall arrange the order of business in advance of a general meeting. The reports of the officers of this Association shall be presented at the annual meeting.

ARTICLE VI.

Section 1. The expenses of members of the executive committee to and from all general and special meetings of the Association and regular or called meetings of the executive committee shall be paid by the Association. Such expenses shall include only railway fare to and from such meetings and hotel bills during the continuance of the meeting.

Section 2. The expenses of the officers and members of all regular and special committees while traveling on business of the Association shall likewise be paid, the same to include only railway fares and hotel bills.

ARTICLE VII.

Section 1. The annual dues of this Association shall be \$5 per unit of capacity. They shall be payable on the fifteenth day of January of each year.

Section 2. The secretary shall make sight draft for annual dues on the date above stated. Should such draft be unpaid, the member so drawn upon stands suspended until paid. At the following annual meetings the names and amounts due and unpaid shall be read, and such members shall be dropped from the Association. Notice of contemplated action shall be given to members in arrears 30 days before annual meeting.

ARTICLE VIII.

Section 1. This constitution may be altered or amended at any annual meeting by a two-thirds vote of the capacity represented at the meeting. The proposed amendment must be submitted to the secretary at least 30 days before the annual meeting, and he must notify members by mail of the proposed change.

MILLSTONE CEMENT AND FILLING.

Messrs. Cutter and Wood, 35 Arch street, Boston, Mass., successors to the Union Stone Company, manufacture an article that is of great interest to every miller. It is a millstone cement and filling, which, they claim, cuts equal to buhr-stone itself. It is highly recommended for patching cavities and seams in millstones of all kinds. A dry material containing the cement and ground French buhr-stone, and a can of liquid to mix it with as required come in one package. The manufacturers furnish the cement in cases of two sizes for small users and in barrels. For further particulars address the manufacturers.

ECHOES OF THE CONVENTION.

Following is an abstract of the report of the executive committee of the Millers' National Association:

The Millers' National Association to-day represents a live membership of about 1,412 units daily capacity (100 barrels to the unit) or 141,200 barrels per 24 hours aggregate capacity. The records show this to be the strongest membership that the Association has ever had. In 1879, when at its flood tide, the aggregate capacity was about 140,000 barrels per day, and at that time "every miller" was supposed to be a member of the National. In 1883 the membership of the Association rapidly declined, and from 744 individual members in 1879 it became reduced to less than 300. From 1883 to 1888 the Association remained nearly at a stand-still, the faithful few keeping it alive and useful. At the Buffalo convention of '88 a reduction in the cost of membership was made, which resulted in quite a material addition to our ranks. One year ago the aggregate capacity of the mills in good standing in the association was about 1,200 units. We have therefore made a handsome increase during the 12 months passed, of over 200 units, or 20,000 barrels per day. The 1,412 units of membership are divided as to territory as follows: California 9; Delaware 6; Illinois 167; Indiana 76; Iowa 10; Kansas 22; Kentucky 16; Maryland 31; Michigan 47; Minnesota 446; Missouri 129; Montana 1; Nebraska 28; New Jersey 2; New York 144; North Dakota 5; Ohio 90; Oregon 5; Pennsylvania 25; South Dakota 4; Tennessee 13; Texas 6; West Virginia 2; Wisconsin 128. The following State Millers' organizations, which have heretofore had no connection with or particular interest in the National, have

upon the dates stated adopted resolutions allying themselves to our Association, strongly endorsing its work and advising all their members to take membership certificates in the National, at the same time electing representatives for our executive committee: August 24, 1889, North Dakota Millers' Association, member executive committee, Jno. M. Turner, Mandan; November 15, 1889, Pennsylvania Millers' Association, member executive committee, W. Latimer Small, York; December 3, 1889, North Indiana Millers' Association; January 17, 1890, Nebraska Millers' Association, member of executive committee, C. C. White, Crete; February 24, 1890, Michigan Millers' Association, member of executive committee, W. B. Knickerbocker, Albion. This action on the part of the State Associations, while it has added comparatively few members to our Association thus far, has undoubtedly stimulated the general interest in a National Association and will evidently result in considerable good.

Patent litigation was referred to in the secretary's report as follows:

The Consolidated Roller Mill Company commenced active operations in the courts shortly after the last national convention. Upon their demand a list of our members in good standing, March 9, 1887, the time of the agreement between that company and our Association, was furnished, and they have refrained from annoying our members further than to send them their threatening literature, the same as is mailed to all millers in the country. This has caused an exhibition of trepidation on the part of some members, and many letters have been written to the secretary asking explanation as to the status of affairs. Replies assuring our members of their safety have been made, and the general result has probably been beneficial for the Association. On July 23 we were notified by the Colchester Milling Company, of Colchester, Ill., that one H. Bridenthal, of Vincennes, Ind., had threatened them with suit on account of alleged infringement of his patents April 17, 1888, No. 381,324, on bolting-reels. The matter was taken up by the executive committee on Aug. 12, and careful investigation resulted in the belief that Mr. Bridenthal could not maintain his claims. The secretary communicated with Mr. Bridenthal, but could obtain no replies from him, and subsequently when this gentleman learned that he had the National Association to deal with, if he intended pushing his demands, he subsided and has entered no suits, nor made further threats. Sept. 19 C. A. Pillsbury and Company, of Minneapolis, reported that Wm. E. Lee, of Swan Lake, Minn., had entered suit against them for alleged infringement of his patents on cockle machines. Pillsbury and Company reported that they were using only machines manufactured by the Cockle Separator Mfg. Company, of Milwaukee, and Hodge, Howell and Company, of Buffalo. Acting under instruction of the executive committee, the secretary requested the manufacturers to defend their machines, which they agreed to do. The Cockle Separator Mfg. Company, retained Messrs. Winkler, Flanders, Smith, Boltum and Vilas, of Milwaukee, to defend this suit, and they now have it in hand. A trial was had the latter part of February, resulting in a jury verdict, evidently based upon sympathy for the poor inventor vs. rich miller, for \$1,500, for the plaintiff. Appeal for new trial has been made, and the same will be heard early in July, we are informed. In case new trial is denied, the Cockle Separator Company announced their intention of appealing to the highest court. This suit is being carefully watched and the interests of our members will be guarded. Lee has sent threatening circulars to millers throughout the country, and we are receiving many letters on the subject from our members, but up to date he has entered no further suit. Nov. 22 a certain J. H. Russell called upon the treasurer and secretary, and stated that in 1873 he had purchased of Geo. T. Smith the exclusive right to manufacture and vend midlings-purifiers under Smith's patents in the States of Wisconsin and Michigan, and that he intended entering suits against millers in those States who had purchased machines outside of this contract, to collect damages. In the latter part of the following month notice was received that Mr. Russell had entered suit against J. O. Kendall and Company of Hartford, Wis., members of our Association, through an attorney, G. W. Hazleton, of Milwaukee. We appealed to E. P. Allis and Company, who had sold these machines to Kendall and Company, to protect their customers, but they refused to do so. Investigation by the executive committee of Russell's claims led them to believe that they were valid, but in view of the fact that similar contracts to Russell were held in other States, which might cause the issue to become of national interest, it was deemed best to keep careful watch of this suit. N. C. Gridley, of Chicago, an attorney who was employed in the former Smith purifier suits, was retained by Kendall and Company. He has filed a demurrer to the complaint, which will have a hearing the latter part of June or first of July, and in the event of the demurrer not being sustained, will file an answer, which he is confident will be sustained and defeat Russell's claims.

The Smith Company advises us that Russell has entered suit against them in Detroit and express belief that they will defeat him. It is reported also that he has sued B. S. Potter, of Barton, Wis., who is not a member of our Association. On May 29, 1890, F. Arnold, St. Cloud, Minn., advised us that the Consolidated Roller Mill Company had sued him for infringement of Steven's patent corrugation, used on rolls which he purchased of the Phoenix Iron Works Company. Mr. Arnold is a member of this Association, and though he purchased these rolls prior to date of our agreement with the Consolidated Roller Mill Company, they were not in use before that time, and the question arises as to this technicality. We are trying to persuade the Consolidated Roller Mill Company to test their case on some one else. Mr. Arnold was advised to be present at this meeting with all evidence in the case, for the inspection of the executive committee. The Millers' National Association holds the bond of the Phoenix Iron Works Company in the sum of \$50,000, which if still sound and good will amply protect our members from such suits.

The utter lack of interest in the sessions of the convention may be judged from a note in a daily journal issued during the convention. This note, printed on Thursday, was as follows:

President Greenleaf and others were indignant last evening at the lack of interest displayed by members of the convention. When the meeting adjourned at 12 o'clock yesterday, it was fully understood that there was to be an evening session, and several seriously discommoded themselves in order to attend it. When the hour, 8:30, had arrived, very few members were present, but they came straggling in and held an informal talk until about 9:30, when the chairman rapped for order and said that, if anybody had any topics to discuss or resolutions to introduce, he would be pleased to hear them and they would have a pleasant gathering among themselves. Then, much to everybody's surprise, Mr. Clark arose in his seat and said: "It seems to me that we have had a little pleasant discussion in a quiet way. I don't know what is before the meeting, but for one I would prefer to adjourn, and I will move to adjourn until to-morrow at 10 o'clock." The motion was then put and carried without dissent, not even those most anxious for an evening session voting against it.

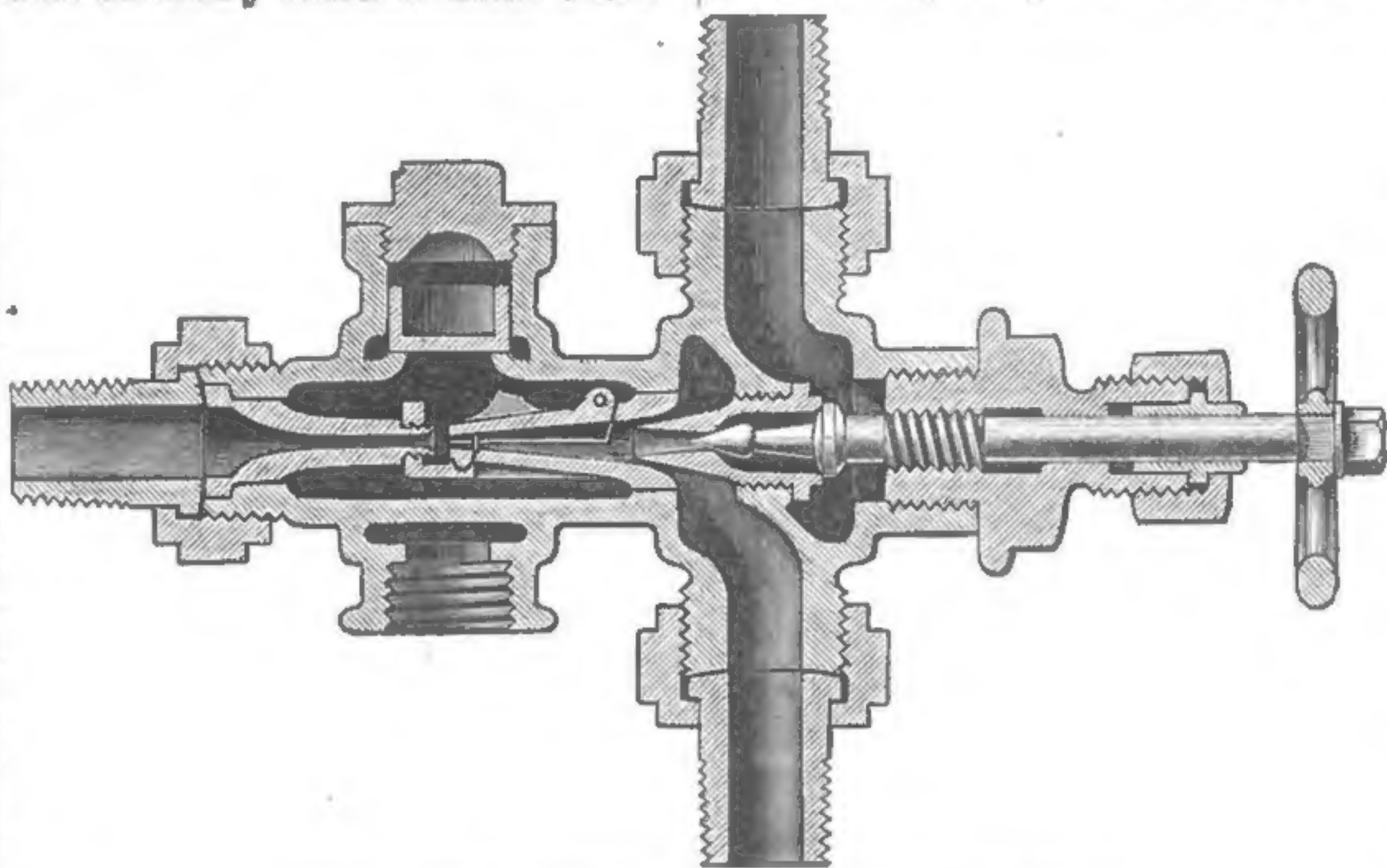
THE MILLERS VISIT DULUTH.

The Minneapolis convention of the Millers' National Association closed with the grand banquet on Thursday evening, June 19, and at the close of the festivities a number of eastern delegates left on an excursion through the wheat-belt of the northwestern region, by special train, made up of the private car of the president of the Milwaukee road, the car of General Manager F. D. Underwood, of the Soo, and a regular Pullman sleeper. The arrangements for the trip had been made by A. M. Bailey, of Minneapolis, and the visitors were highly pleased with the courtesy of the local millers in providing the entertainment. The party arrived in Duluth Friday morning and passed some time in an inspection of the mills and elevators of that city, afterward taking a steamer ride on the bay. Friday night the start was made for Fargo and points along the Great Northern Line. The wheat crops were an object of special interest to the tourists, and they arrived in Minneapolis Saturday evening, having greatly enjoyed the journey. Resolutions were passed by a committee of the guests, thanking the millers of Minneapolis for the continued hospitality shown during the convention and for providing the enjoyable trip over the Great Northern. The following were in the party: J. M. and A. D. Caine, Atchison, Kan.; Charles Dunwoody, Philadelphia; G. S. Roper, Rock Island, Ill.; W. C. McDonald, Tonawanda, N. Y.; James Wilson, Glasgow, Scotland; H. D. Stone, Rochester, N. Y.; C. H. Cummings,

Boston; W. H. Davis, Rochester, N. Y.; Joseph Bosler, Ogontz, Pa.; S. Stone and C. E. Angle, Rochester, N. Y.; J. M. Hamm, London, Eng.; H. F. Shuttleworth, Buffalo, N. Y.; L. B. Gibbs, Mayville, N. D.; H. Grigg and A. R. James, Buffalo, N. Y.; Geo. Wilson, Rochester, N. Y.; Geo. Urban, Buffalo, N. Y.; Alex. Ferguson, Rochester, N. Y.; F. Baker, Philadelphia; O. Neustadt, New York; J. Smith, Buffalo; Thomas Palmer, New York; H. B. Whitmore, G. B. Eustis, A. C. Loring, F. J. Clark, F. E. Holmes, F. D. Zimmerman, F. C. Pillsbury, A. M. Bailey, Minneapolis; N. Sellers, Philadelphia, and C. S. Espencheid, Hastings. The excursionists had any amount of fun at the expense of one another, one of the merry incidents being the presentation to F. C. Pillsbury of a large brass watch and a chain about four feet in length.

AUTOMATIC RESTARTING INJECTOR.

Herewith is illustrated the improved automatic restarting injector, manufactured by Messrs. Schaeffer and Budenberg, 40 John street, New York, N. Y., and 18 South Canal street, Chicago, Illinois. The engraving shows a sectional view of the injector. The makers claim this to be the best and most reliable injector on the market at present. It is a very simple machine. It has only one overflow, no



IMPROVED AUTOMATIC RESTARTING INJECTOR.

sliding nozzles and no extra side openings and valves liable to stick and clog, but accomplishes its automatic action simply by the opening and closing of its flap-nozzle, the effect of which is instantaneous. If the conditions under which the injector works should be disturbed from any cause, it will automatically restart as soon as the conditions are restored. The suction-pipe may be taken out of the water, and on being replaced the injector will

restart feeding. Although a single-tube injector without supplemental lifting-jets, this restarter is second to no other injector in its lifting capacity. It is generally made for lifts of from 16 to 18 feet, but can be arranged for lifts of 22 feet and more, if desired. It works under all pressures ranging from 20 to 150 pounds, and equally well, whether lifting or non-lifting.

A GOOD MOVE IN PATENT PRACTICE.

The Commissioner of Patents on the 13th of February rendered a decision bearing upon the inclusion in one application of claims for the method and claims for the apparatus by which the method may be carried out. He holds substantially that, while separate claims may be made for product and process, there can probably be but one patent, and hence but one application should be required by the office. So, also, where some of the claims cover a machine and others a supposed process, the latter being merely the function of the machine, one application is sufficient to secure the invention and is exhaustive of the applicant's rights. The same doctrine is also applicable where claims are formulated upon the same structure, some to cover it broadly or in a general form, while others are specific in character.

THE GRAIN APHIS IN NEW YORK.

Following is a dispatch sent out from Albany, N. Y., under date of June 14: State Entomologist Lintner says that the grain aphis, or plant-louse, is more destructive on rye fields this year in this State than at any time since 1861. In all parts of the State and in New Jersey much trouble is being experienced from its ravages. An apparent blight in oat

fields in many places is owing probably to the same insect. Dr. Lintner says that it is unfortunate that no way of arresting their serious attacks is known, but for the present the insect will have to be handed over to its parasite. This lays its eggs on the aphids, these hatch, and the young brood eats into the aphids, which swells up, and after devouring everything inside the case, the parasite comes out through a small round hole. There are several species of these parasites, and Dr. Lintner recommends that blighted grain be allowed to remain so that the parasite may multiply and do much toward exterminating the aphids.

The eagerness of the "big millers" to manage the export trade to suit their interests is legitimate. They have found that they can no longer hold the home markets against the "small millers," whose modern mills turn out flour quite as good as that of the big mills, and they understand that they must seek a market abroad for a large surplus. It is nonsense for the "big" millers to pretend to be working for the good of the "small" millers. All the interest they feel for the "small" millers is a hatred towards them as rivals who are too numerous to be crushed.

BREADSTUFF EXPORTATIONS.

Breadstuff exportations during the month of May continued to show an increase over the May exports of last year. The amount of wheat exported in May was 4,392,298 bushels, worth \$3,746,201, against 3,467,232 bushels, worth \$2,861,048 in May, 1889. For the eleven months ended May 31 the total was 50,844,625 bushels, worth \$42,098,826, against 42,916,247 bushels, worth \$38,708,270 a year ago. The wheat flour exports in May footed 992,404 barrels, worth \$4,392,638, against 747,309 barrels, worth \$3,580,576 last year. For the 11-month period the total was 11,135,158 barrels, worth \$52,035,342, against 8,290,146 barrels, worth \$40,213,349, last year. The total of wheat grain and flour exported in the eleven months ended May 31 was equal to about 107,520,615 bushels of wheat, worth \$94,734,168, against 84,366,977 bushels, worth \$78,921,639, in the corresponding period a year ago.

During the eleven months ended May 31 the barley exports amounted to \$735,819, against \$836,075 a year ago; corn \$38,-

914,301, against \$29,916,197; corn-meal \$825,608, against \$796,244; oats \$3,415,032, against \$232,137; oatmeal \$714,477, against \$240,441. The total value of the May exports this year was \$13,673,620, against \$9,762,865 last year; for the first five months of 1890 the total is \$71,193,559, against \$48,064,222; for the eleven months ending May 31 the total is \$139,843,909, against \$111,045,698. The outlook for the near future is quite encouraging. There is likely to be a demand for all or nearly all the surplus of our wheat crop this season, and the exports of corn and oats promise to continue large.

MILLING inventions of real greatness and value are few and far between in these days. Most of the inventions are in the line of grain-weighing contrivances, and of these there is a grand and wholly unavailable surplus.

It is thought that the recently formed syndicate which has bought up the flouring-mills in Nashville, Tenn., is a wholly American syndicate, and that the English element in it is merely nominal.

SPECIAL NOTICES.

BOLTING CLOTH.

Do not order your cloth until you have conferred with us. It will pay you, both in point of quality and price. We are prepared with special facilities for this work. Write us before you order.

CASE MANUFACTURING CO.,
Columbus, Ohio.

Office and Factory, 5th Street, north of Naughten.

TOLEDO MILL PICKS AND STONE TOOL MFG. CO.

Manufacturer

and Dresser of

MILL PICKS.

Made of the best double-refined English cast steel. All work guaranteed. For terms and warranty, address, GEO. W. HEARTLEY, No. 297 St. Clair Street, Toledo, Ohio. Send for Circular.

N. B.—All Mill Picks ground and ready for use (both old and new) before leaving the shop. No time and money lost grinding rough and newly dressed Picks. All come to hand ready for use.

ALSO MANUFACTURERS OF

Shafting, Pulleys, Hangers, Coupling, Machine and Jobbing, Etc., Etc.

Sometimes
Corrugated Iron is
represented to be
"just as good as" our
Patent Edge Corrugation.
While this is
complimentary to
our material,
unfortunately it does
not work out well
in practice.
The only Corrugated Iron
that can be
recommended for roofing
is manufactured by

The Cincinnati Corrugating Co.
PIQUA, OHIO.

"ELECTRIC" BELT DRESSING.

A WONDERFUL LEATHER PRESERVATIVE, suitable for Leather, Rubber, Cotton or Rawhide Belting. Belts dressed with this dressing will last twice as long and transmit 100 per cent. more power. Save your Belting and prevent heating of journals by running them under a reduced tension. Sold on approval to responsible parties. SEND FOR CIRCULARS.

BUFFALO SPECIALTY MFG. CO.,
67 & 69 Washington Street, BUFFALO, N. Y.

CORNISH'S (OLD ESTABLISHED) ORGANS AND PIANOS!

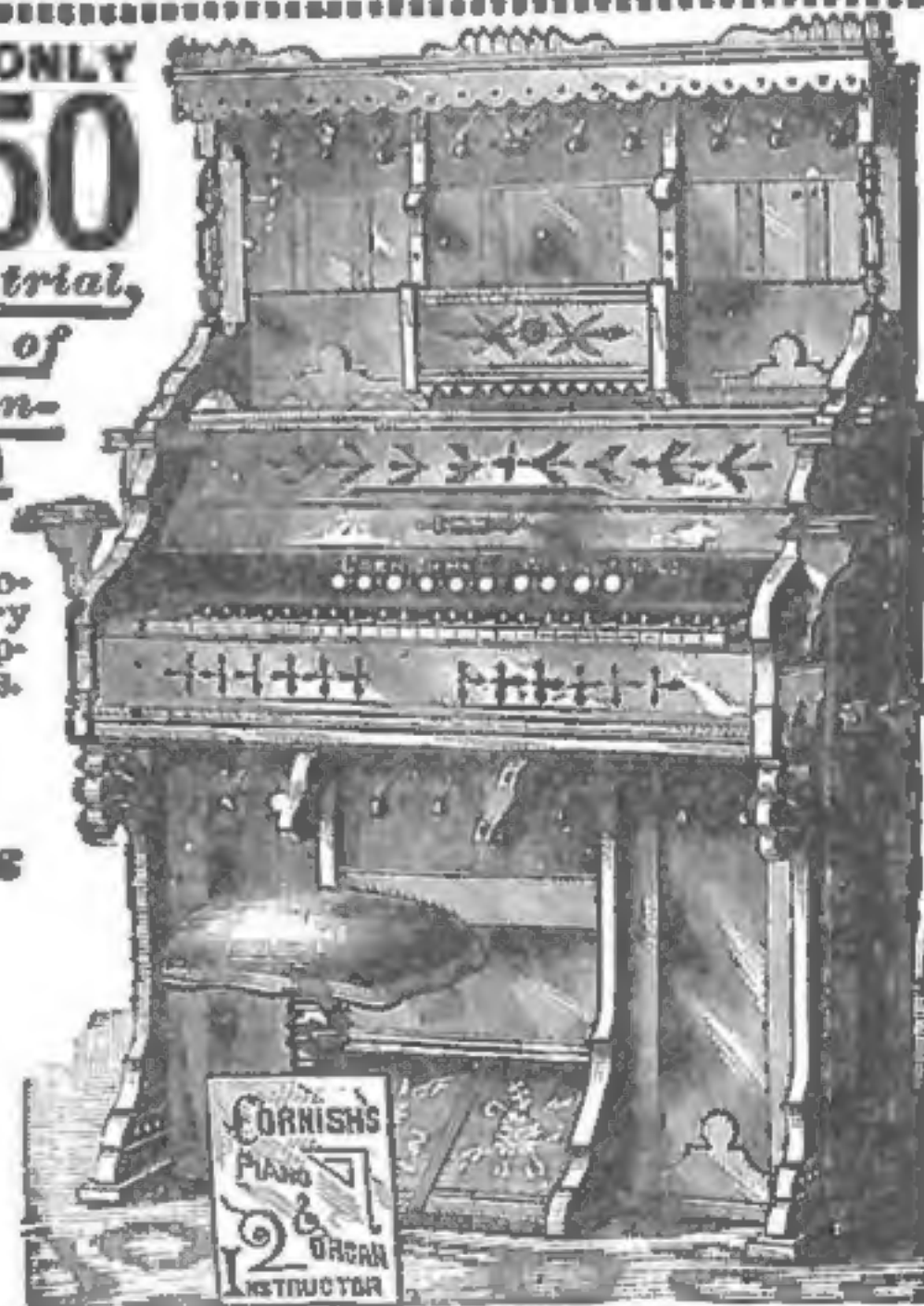
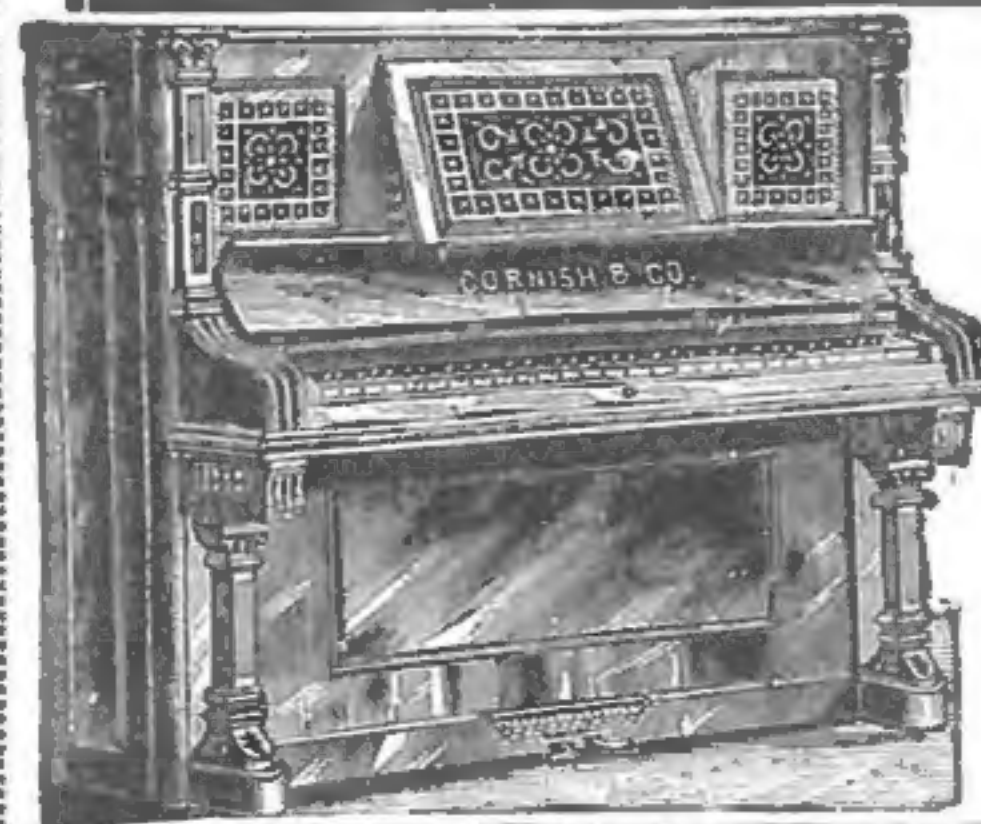
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selling direct to Consumer. From Factory to Family at Wholesale Rates on Terms to suit Purchaser.

\$75 ORGAN { EXACTLY LIKE THIS CUT } **\$50**
\$15.00 CASH **SOLD FOR** After ten days' trial,
and the balance of price, \$35, to be paid in 7 monthly installments of \$5 each. OR IF CASH IS SENT WITH ORDER, WE WILL SPECIALLY ACCEPT \$45.00.

CORNISH'S Specially designed Cabinet Organ, Style "Cano-piletta," No. 10,000, contains 3 sets Orchestral toned Resonatory Pipe Quality Reeds; 6 Octaves; 10 Solo Stops; 3 Octave Couplers (Bass and Treble); 12 Knee Swells and all late improvements. Dimensions—65 in. high, 48 long, 21 wide.

WARRANTED FOR TEN LONG YEARS.
SOLID WALNUT CASE, HIGHLY FINISHED.
Handsome Stool and large Instruction Book, making a Complete Musical Outfit.

HOW TO ORDER. Send a reference as to your responsibility from any Banker, Postmaster, Merchant or Express Agent, and Organ will be shipped at once on Ten Days' Test Trial, and if not, after trial, satisfactory, you can return it and we will pay freight charges both ways. **IF YOU RUN NO RISK.**



REFERENCES.—FIRST NATIONAL BANK, WASHINGTON, N. J., any Commercial Agency in the U. S., and thousands of persons who for the last 20 years have purchased instruments of our manufacture.

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Practical Notes

WELDS COMPARED.—In some experiments lately made in England to test the merit of electric welding, a 1½-inch iron bar was welded both by means of electricity and by hand. The former stood a strain of 91.9 per cent. of the strength of the metal itself, and the latter 80.3 per cent. The electric weld, however, showed cracks when bent cold at an angle of 66°, while the hand made joint stood 138° of bend.

GENERAL NOTES.

M. PEDROUS, a physician at Nantes, France, has the strange gift of being able to see the color of sounds. He says that human voices are red, blue, black, tan, slate and all colors, and that the color of some handsome women's voices is like that of buttermilk.

MILLING PATENTS.

Among the patents granted June 17, 1890 are the following: Henry C. Tayloy, Homer, La., No. 430,222, a grinding-mill.

Alfred I. Anderson, Odell, North Dakota, a device for weighing grain, comprising the combination of a pair of uprights, a T-shaped brace connecting said uprights near their lower ends, a lever mounted pivotally upon the lower end of said T-shaped brace, a pair of vertically-sliding rods provided near their upper ends with sleeves, whereby they are mounted upon the said uprights, and provided at their lower ends with arms connected pivotally to the lever, a brace connecting the upper ends of the uprights and provided with upwardly-extending lugs, a scale-beam mounted pivotally between said lugs and having an adjustable weight at its outer end, and provided at its rear or inner end with a beveled tooth, and spring-pawls attached to the sleeves at the upper ends of the vertically-sliding rods and adapted to engage the beveled tooth of the scale-beam.

Benjamin G. Hudnut, Terre Haute, Ind., No. 430,289, a corn product made from hominy, screened, partly cooked by steam, dried, flattened in rolls, and then graded and cleaned; the process of treating corn in the manufacture of hominy, grits, or meal, which consists in first making into hominy, then grading and drying the same and partly cooking it by steam, then drying and passing through reduction-rolls, and then grading and cleaning the material; No. 430,290, a flaked corn product for brewing purposes, manufactured of hominy graded, dried, cleaned, then partly cooked by steam, and then flattened by passing through rolls, and then dried for use; the process of treating corn for brewing purposes, which consists in manufacturing it into hominy, next separating the hominy from the offal, then drying and cleaning, than partly cooking with steam, then passing through rolls and flattening, and then drying in a suitable machine.

James H. Calkins, Owosso, Mich., No. 430,335, a grain-separator.

Dudley G. Stone, Negaunee, Mich., No. 430,355, a bag filler and holder.

Frederick Wyneken, New York, N. Y., No. 430,558, a grain-elevator.

TURBINE WATER WHEEL.

427,552. Nathan F. Burnham, York, Pa. Filed Oct. 22, 1889. Serial No. 327,795. Dated May 13, 1890.

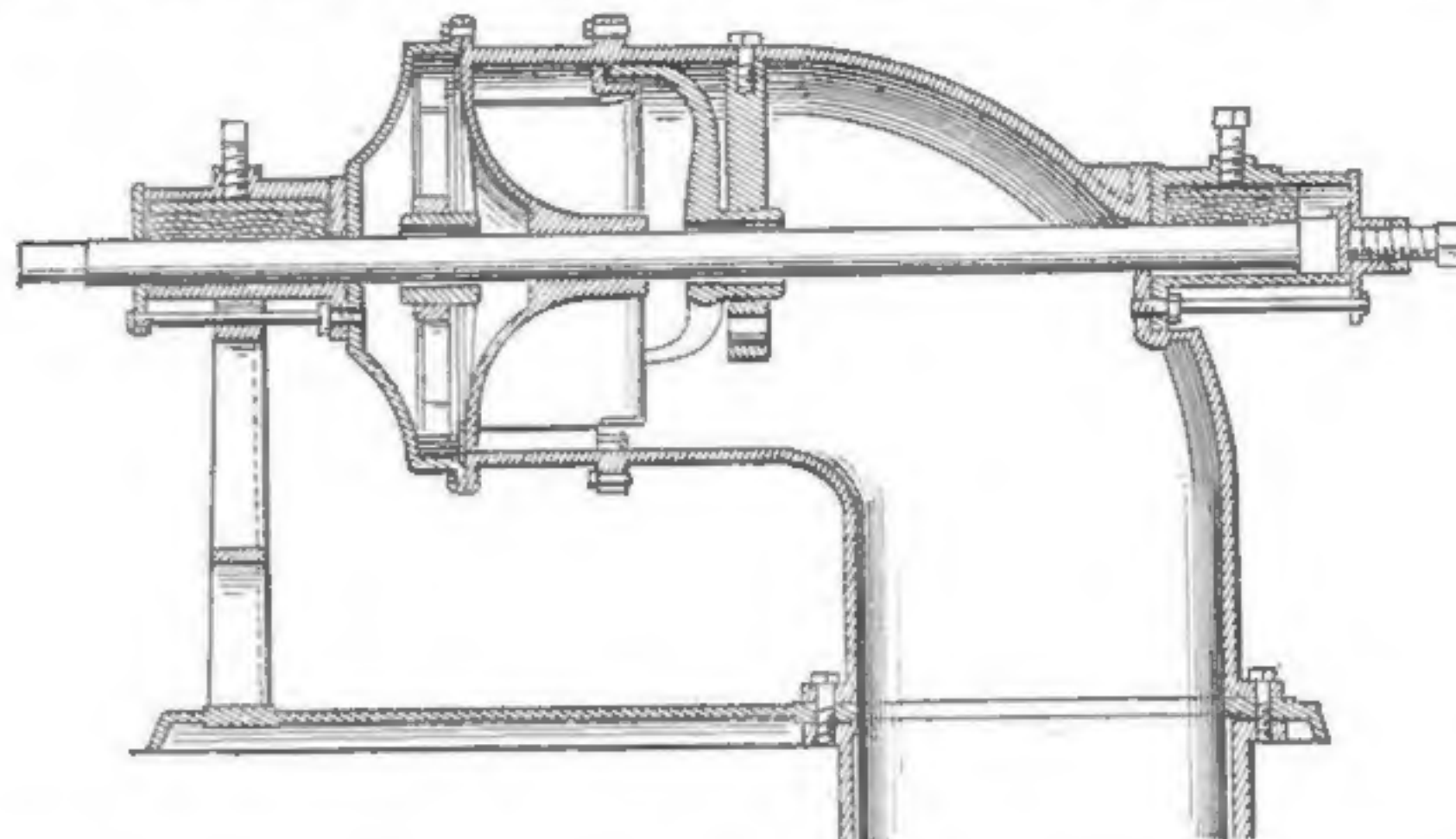
CLAIM 1. The combination of a turbine water wheel gate with its horizontal adjustable bearings on opposite sides thereof to secure correct alignment.

2. The combination of the quarter turn draft tube, the casing secured on the end of the horizontal portion thereof, the gate inside the casing, its arms, the long journal secured thereon centrally in the draft tube, and the adjustable journal bearing at the discharge end of the gate and supported by the draft tube.

3. The combination of the quarter turn draft tube, the casing secured

on the end of the horizontal portion thereof, the cover secured on the opposite end of the casing, the gate, its arms and horizontal bearings on opposite ends of the gate and respectively supported by the cover and draft tube.

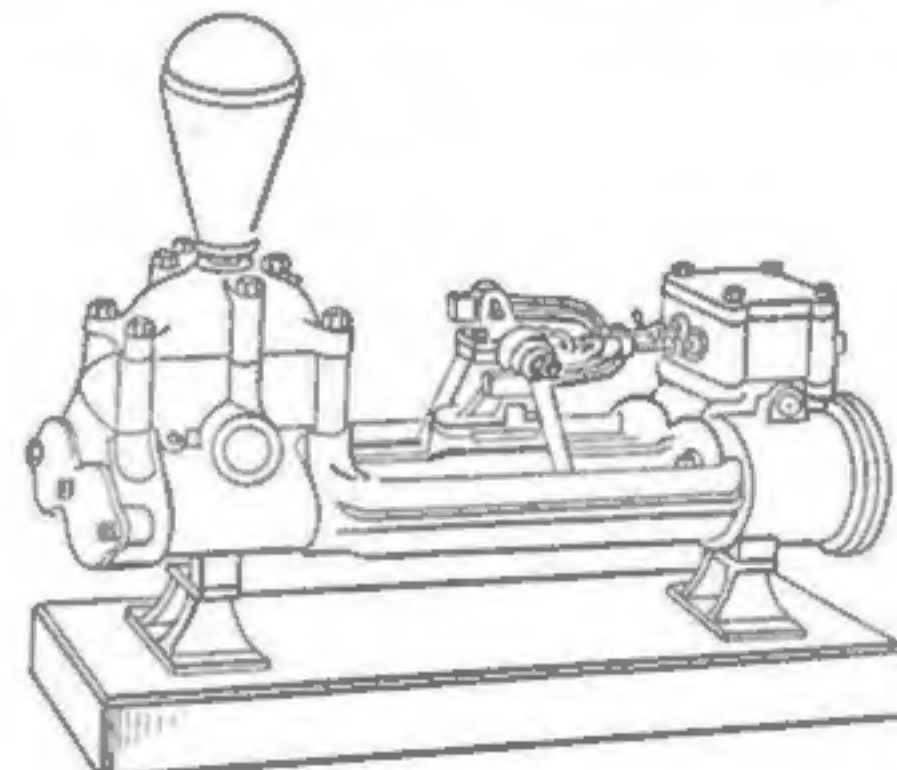
4. The combination of the quarter turn draft tube, the casing secured on the end of the horizontal portion thereof, the cover secured on the op-



posite end of the casing, the gate, arms on opposite ends of the gate uniting in corresponding central horizontal bearings or journals, and adjustable radial supporting arms carrying central bearings, respectively mounted on the wheel cover and draft tube, in which bearing the gate journals turn, whereby accurate alignment, compensation for wear, and proper support for both ends of the gate are secured.

DUPLEX STEAM PUMP.

427,784. John H. McGowan, Cincinnati, Ohio. Filed Feb. 20, 1888. Serial No. 264,601. Dated May 13, 1890.

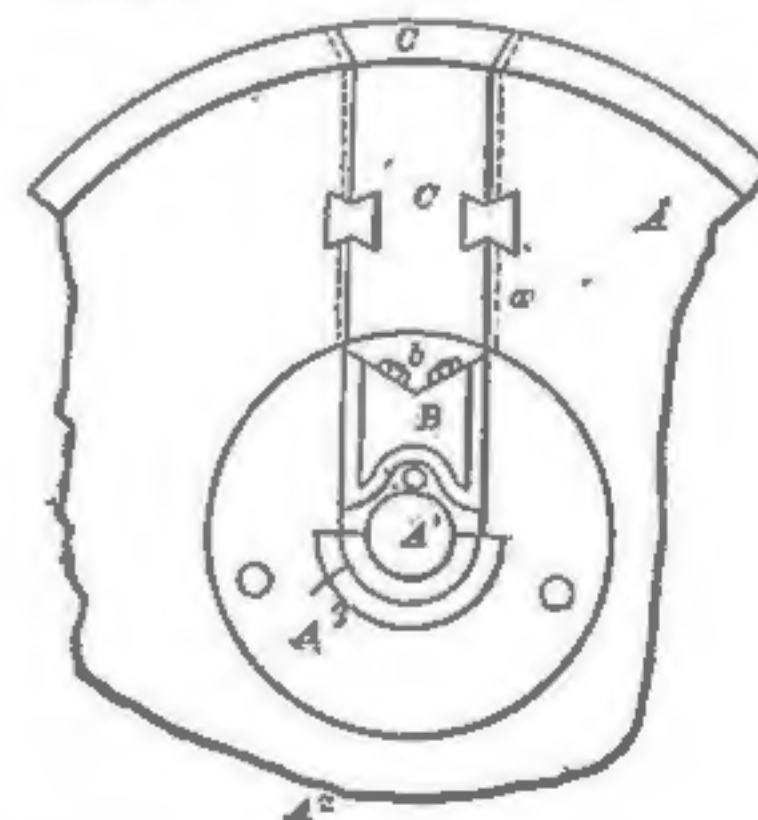


CLAIM 1. In a duplex steam pump, the combination of the concentric rock shafts having cam fingers and each provided with a lever that connects with one of the piston rods, the fixed central bearing for the rock shafts, the slotted links engaged by the cam fingers, the valve rods moved by said links, and the horizontal guides for said valve rods.

2. In a duplex steam pump, the combination of the concentric rock shafts having cam fingers and each actuated by a lever connected with a piston, the valve rods provided with adjustable collars, the slotted links engaged by the cam fingers and embracing the valve rods between the collars, the horizontal guides for the valve rods, and the fixed central bearing for the rock shafts, said bearing provided with horizontal guiding projections for the links.

PULLEY.

429,116. George C. Cowles, East Saginaw, Mich. Filed Sept. 11, 1889. Serial No. 323,593. Dated June 3, 1890.



CLAIM 1. The combination, with a pulley having an opening from the center through the rim and a removable section filling said opening in the rim and the web adjacent thereto, of a block D, detachably tongued and grooved into engagement with the edge of the removable section and also with the pulley-web and detachable transversely to the thickness of the web independent of movement of the said removable section.

2. The combination, with a pulley having an opening from the center through the rim, of a removable hub-section detachably secured in the opening, a removable web and rim section tongued and grooved to the web, and a block D, securing said web and rim section in position.

Seven little missionaries—

Horrible their fate—

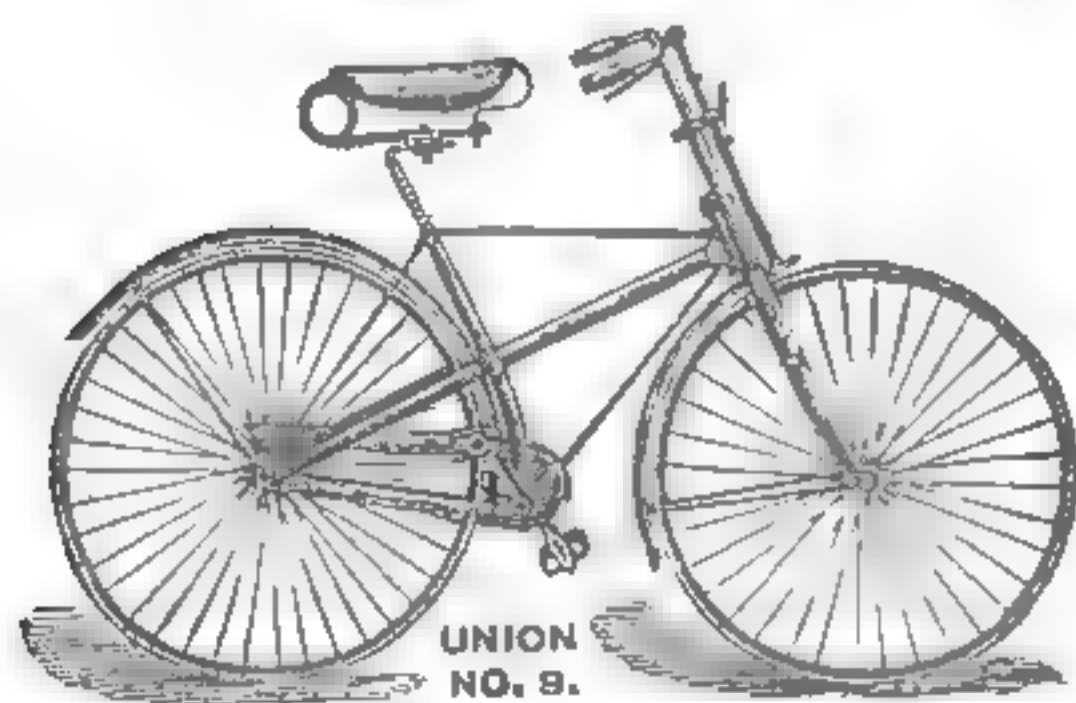
Cannibals picked clean their bones,

Then they were ate.

—New York "Produce Exchange Reporter."

Union Cycle Mfg. Co.

—MAKERS OF THE CELEBRATED—



**Union Safety and
Springfield Roadster
BICYCLES.**

Highlandville, — Mass.

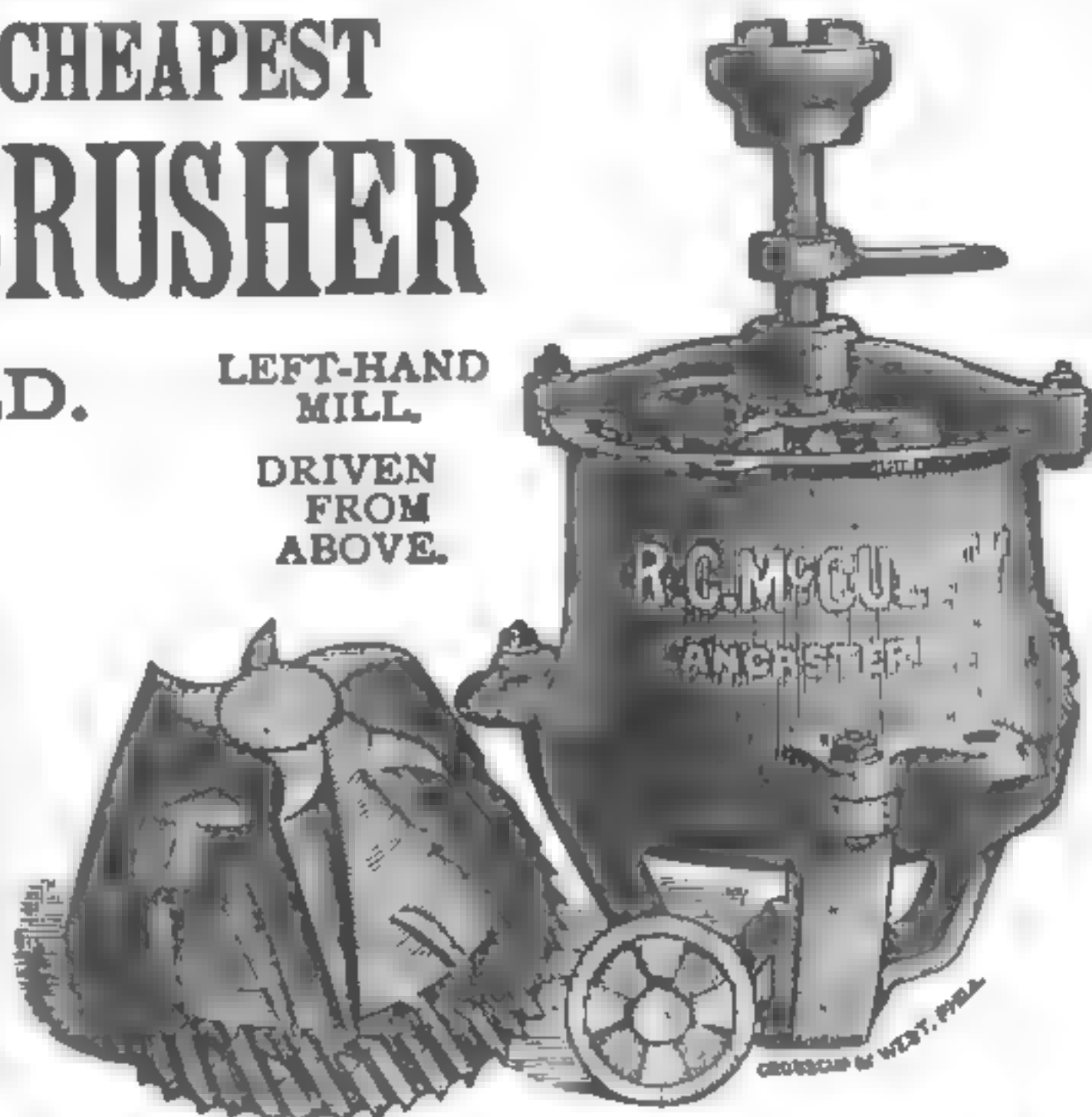
THE BEST AND CHEAPEST CORN AND COB CRUSHER

IN THE WORLD.

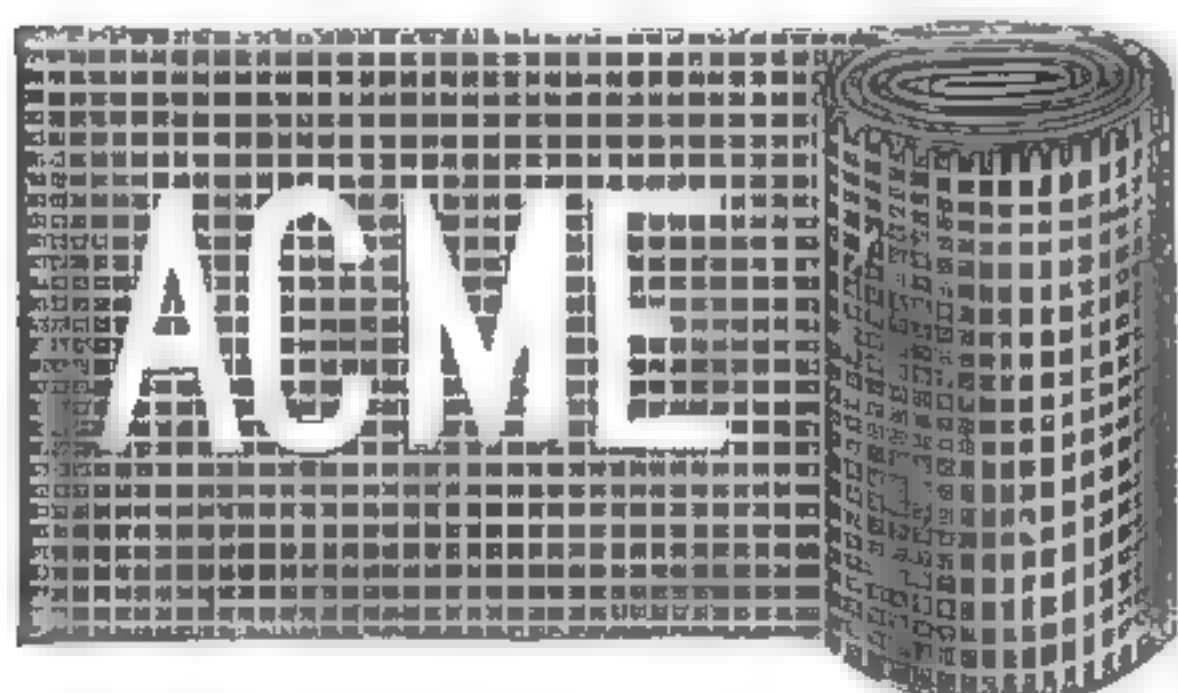
All wearing parts cast of a steel mixture. Notice difference in construction. Most area where most work is done, where all other crushers have least area where most work is done. Low priced machinery is not the cheapest, considering durability and efficiency. Sent on 80 days' trial when satisfactory reference is furnished.

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Brooklyn Wire Cloth Works,
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FILL CAVITIES AND SEAMS
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OUR FRENCH BUHR STONE
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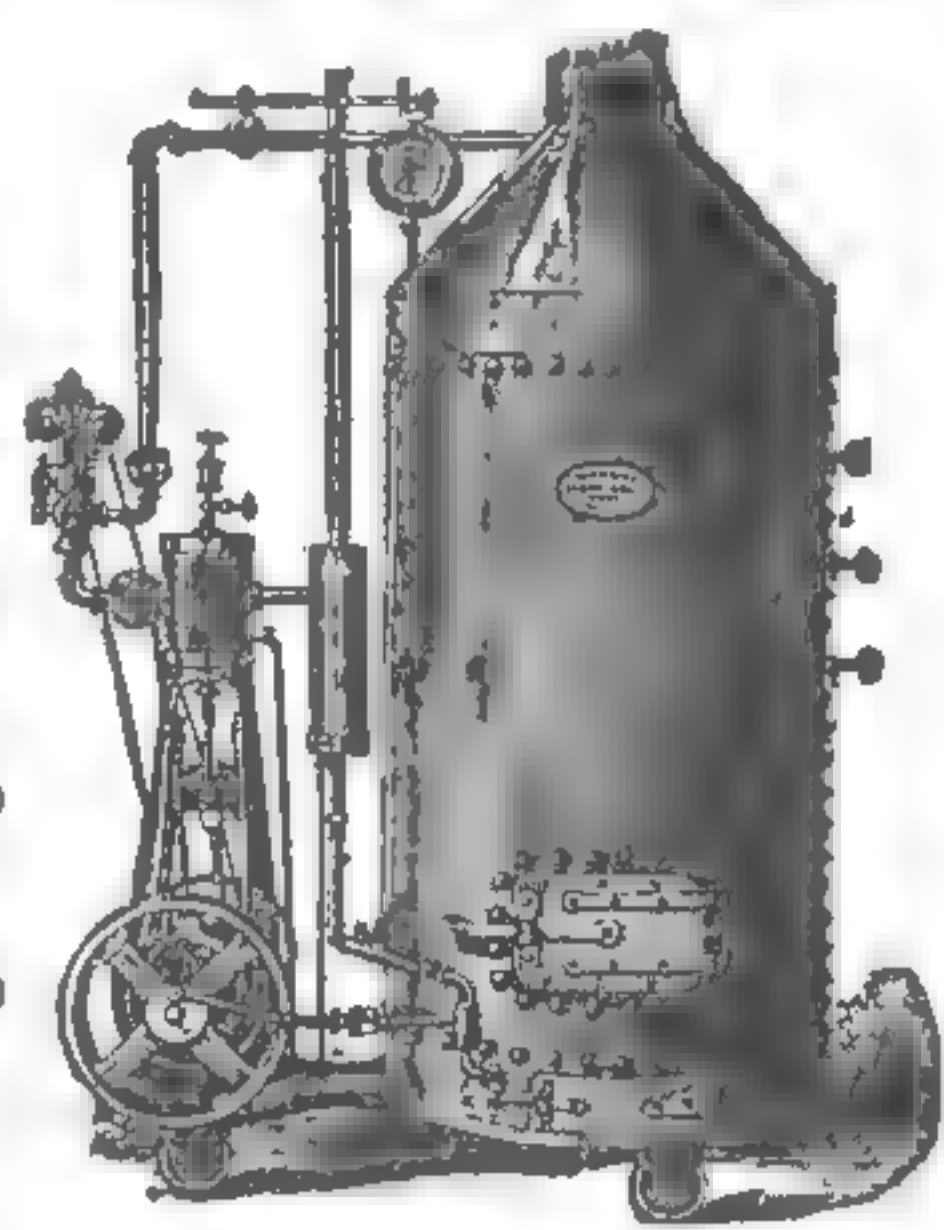
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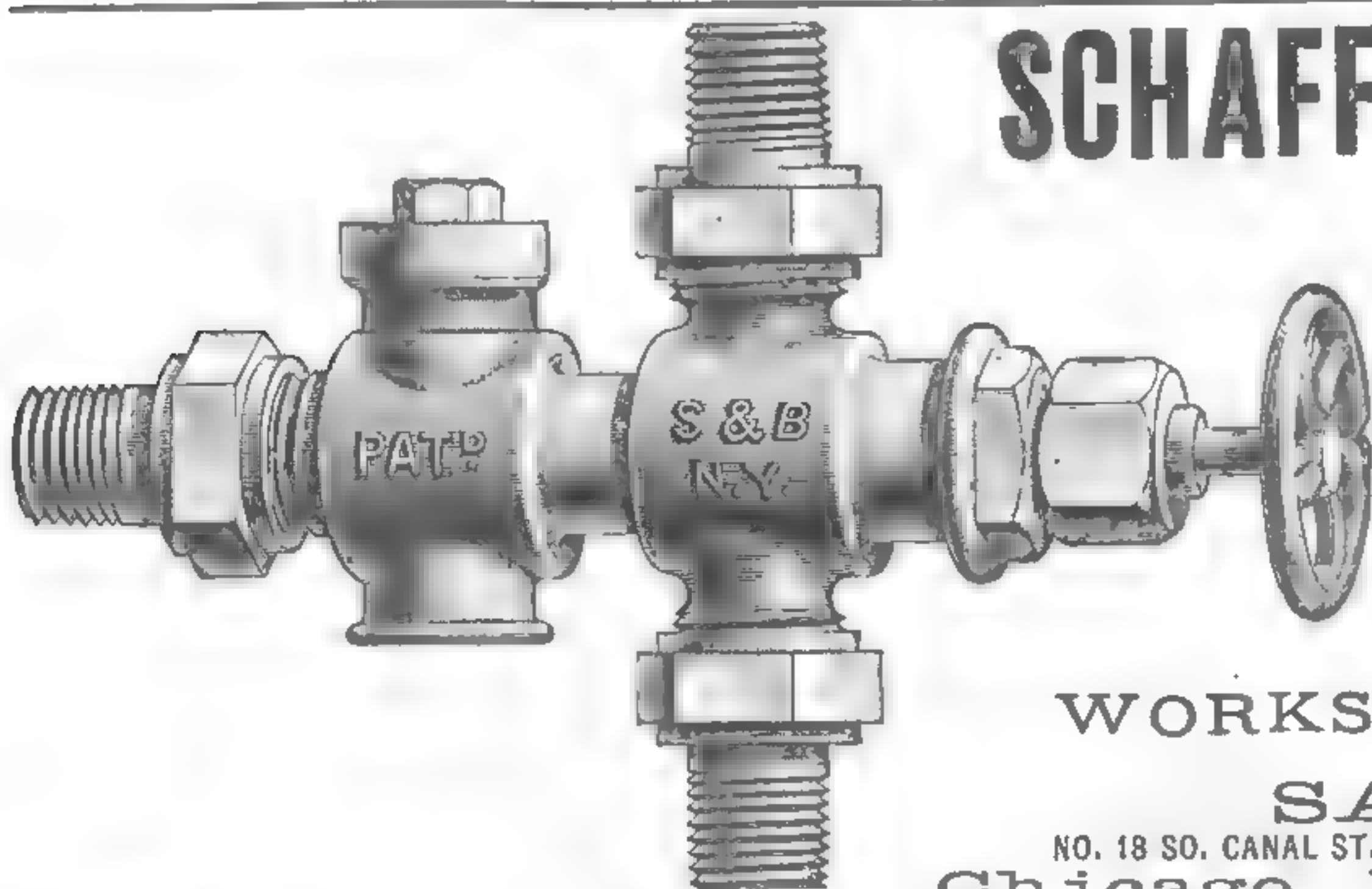


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**IMPROVED RESTARTING INJECTORS
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PYROMETER AND THERMOMETER, STEAM TRAPS, REDUCING VALVES, AND ENGINE AND BOILER APPLIANCES IN GENERAL.

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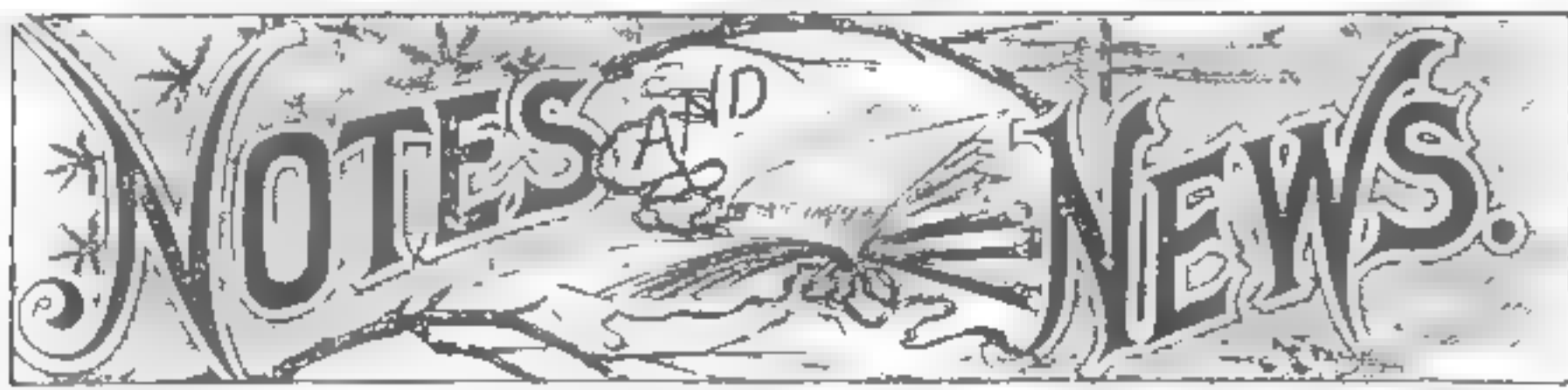
NO. 40 JOHN STREET,
New York.



KEEP YOUR BELTS FROM SLIPPING

And Save Your Power by Using FRICTION COVERING for Pulleys. Agents Wanted. Satisfaction Guaranteed. Easily Applied. No Rivets. Effective.

NATIONAL PULLEY COVERING CO., BALTIMORE, MD.



H. Porter, miller, Maple Hill, Mich., is dead.
 J. Humphrey, miller, Brookville, Pa., is dead.
 Avis & Mills, flour-mill, Hudson, Mich., dissolved.
 W. H. Manker's grist-mill, West Liberty, Ky., burned.
 C. W. Hall, flour-mill, Jackson, Minn., admitted a partner.
 The Delta, Md., flour-mill burned; loss \$8,000; insurance \$5,000.
 The Mer Rouge Ginney Co., Mer Rouge, La., will at once build a grist-mill.
 Schorre Bros., grist-mill, Edna, Tex., sold to A. Malsch, who will remodel.
 Fulaaki City, Va., men project a 50-barrel roller flour-mill; machinery is wanted.
 The Illinois wheat area is 500,000 acres less than last year and that of California 550,000 acres less.
 The United States wheat crop of 1886 was only 151,999,906 bushels, and averaged 9.5 bushels per acre.
 Emory Bros., Toledo, O., have placed an order with The Case Mfg. Co., Columbus, O., for 2 pairs of rolls.
 J. S. Renfro, Opelika, Ala., has points on a projected stock company to build a 125-barrel roller flouring-mill.
 Heffner & Co., Circleville, Ohio, have added 2 pairs of rolls, purchased from The Case Mfg. Co., Columbus, Ohio.
 The Regina Grist Mill, Regina, Manitoba, Canada, burned with other property; loss \$14,000, with small insurance.
 The Case Mfg. Co., Columbus, Ohio, have an order from J. M. Arthur & Co., Portland, Oregon, for 4 pairs of rolls.
 Bauer & Buhner, Sturgis, Mich., are putting in 12 pairs of rolls, furnished by The Case Mfg. Co., Columbus, Ohio.
 M. Ferguson's City Mills, Poplar Bluff, Mo., burned with 1,200 bushels of corn-meal and 1,000 bushels of corn; fully insured.
 The Case Mfg. Co., Columbus, Ohio, have an order from A. P. Thurston, Rob Roy, Ind., for 2 pairs of rolls and other machinery.
 The Star Mill Co., Racine, O., has placed an order with The Case Mfg. Co., Columbus, O., for 6 pairs of rolls and other supplies.
 The Case Mfg. Co., Columbus, O., have an order from C. C. Harp & Co., Millburn, Ky., for 6 pairs of rolls and other machinery.
 The Case Mfg. Co., Columbus, O., have an order for rolls, flour-dressers and other machinery from R. C. Poage & Son, Ashland, Ky.
 The Case Mfg. Co., Columbus, Ohio, have an order from McKensie & Hyslop, Quincy, Mich., for 2 pairs of rolls for corn-meal and feed.
 E. Cole & Son, Pawling, N. Y., are remodeling their mill to the full roller system and have placed their order with The Case Mfg. Co., Columbus, Ohio.
 The Stanford Mill Co., Stanford, Ky., sold their roller plant to S. G. Hocker and others for \$10,000. The company reorganized with T. J. Foster president.
 The Case Mfg. Co., Columbus, Ohio, have an order from H. Gates & Sons, Mogadore, O., for rolls, purifiers, centrifugals and other machinery for a full roller mill.
 C. A. Pillsbury says that he believes the wheat acreage in North Dakota this season will be 10 per cent. smaller than last year, and in South Dakota 10 to 15 per cent. smaller.
 Mr. Chas. H. Seyt, of Highland, Ill., has purchased the "Opposition" mill plant in that town, and he is remodeling it and getting in readiness to start on the new crop.
 W. H. Brown, Gallatin, Tenn., bought the Gallatin Flour & Saw Mills. He will form a stock company to operate the plant. The flour-mill will be remodeled to rolls. Machinery is wanted.
 F. Glockner & Co., Pomeroy, O., have placed their order with The Case Mfg. Co., Columbus O., for all the rolls, flour-dressers and other machinery for a full roller mill on the Case system.

Schuler & Scherich, millers at Jasper, Ind., have made an assignment. Liabilities \$15,000, and assets \$10,000. Mr. Scherich was also interested in the Royal Chemical Company, of Louisville, Ky.

Tacoma, Wash., is coming to the front as an exporting city. A ship has recently been chartered to carry a full cargo of flour, 14,000 barrels, from that port to Europe. The flour is the product of a new mill recently started at Tacoma.

Compared with last year the promise of reduction in wheat is approximately as follows in the principal states: Illinois loses 18,500,000 bushels, Indiana 13,000,000 bushels, Michigan 7,550,000 bushels, California 10,000,000 bushels, Kentucky 3,200,000 bushels, Missouri 4,400,000 bushels, Texas 2,000,000 bushels, Ohio 3,400,000 bushels.

The Supreme Court of Illinois has rendered an important decision on option dealing in grain. Charles James bought five-thousand bushels of wheat from William Sobey, of Jacksonville, a "bucket-shop" trader, and put up two cents a bushel margin. He closed the deal in a few days at an advance, and neither received nor delivered any grain. The court finds that he did not buy or sell grain for actual use, but simply for speculation, and says that the purchase of grain or other commodities for future delivery is a gambling contract, if the intention at the time of the purchase was to make a future settlement and not for actual delivery. The case was tried on appeal by William Sobey from the decision of a lower court, which had imposed a fine upon him for illegal trading, and the Supreme Court affirmed the penalty. The opinion and decision will meet with general approval.

PERSONAL MENTION.

Mr. E. C. Faircloth, one of the hustling millers of Nashville, Tenn., a member of the American Mill Co., of that town, was among recent visitors to the sanctum of THE MILLING WORLD. He reports a really bad outlook for winter wheat on this crop, predicting a short crop of shriveled grain. He says the winter-wheat bulls are right, and the bears are dead wrong.

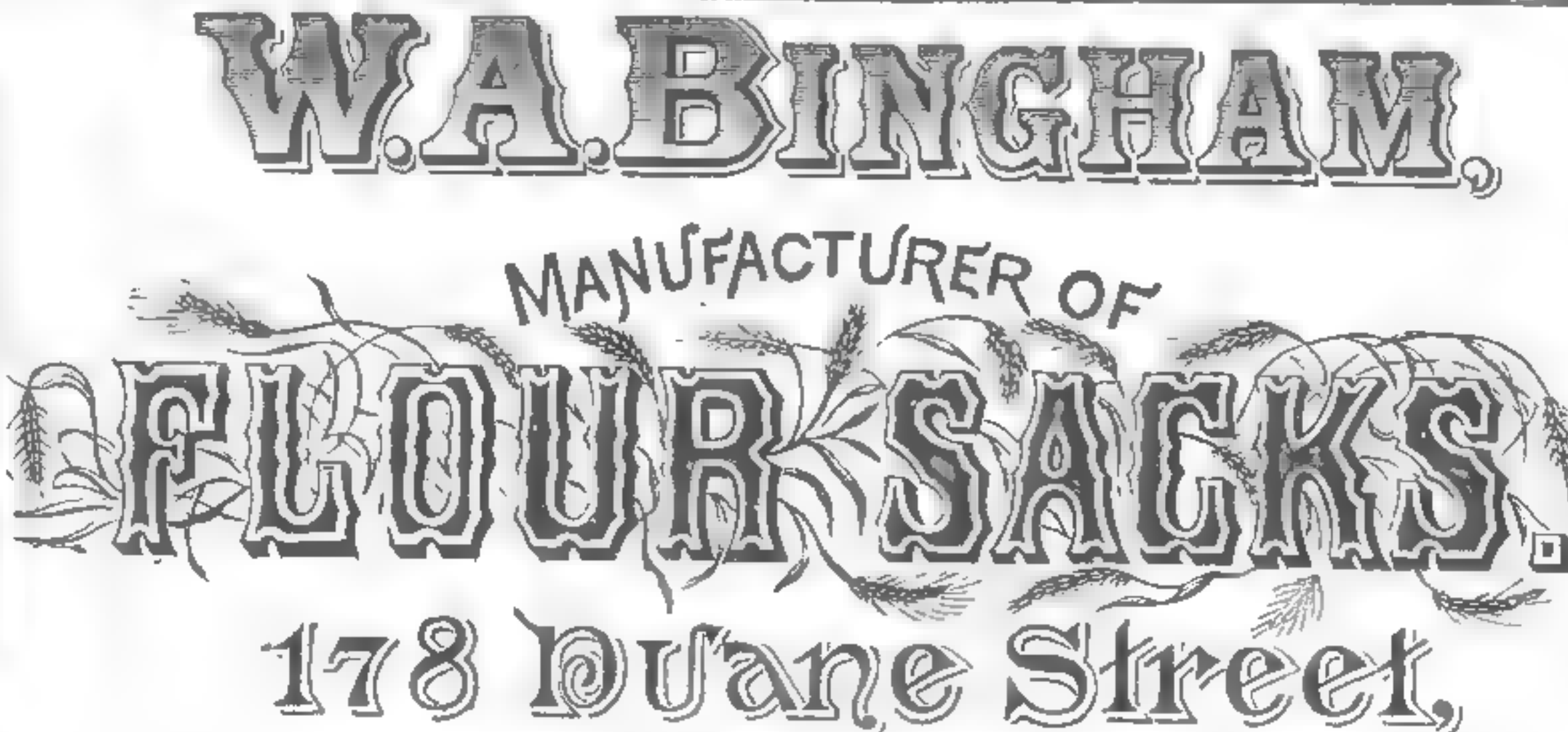
The July number of Scribner's Magazine has a fine list of contents, including a frontispiece, "O Babbling Spring," by Henry Wolf; "The Suburban House," by Bruce Price; "Horace, Book III, Ode XIII, To the Font Bandusia," translated by Austin Dobson in rondeau form; "Jerry," VII-XIII; "Bird Cradles," by W. Hamilton Gibson; "The Rights of the Citizen-IV-To His Own Reputation; "Under Five Shillings," by Octave Thanet; "To the Cricket," by A. Lampman; "In the Valley," XXXV.-XXXVII, by Harold Frederic; "The House of Tembinoka," by Robert Louis Stevenson; "Surf and Surf-Bathing," by Duffield Osborne; "In Glad Weather," by Charles B. Going; "The Last Slave Ship," by Geo. Howe, M. D., and the usual interesting miscellany "The Point of View." The illustrations are simply perfect, those in the article on "Bird Cradles" being equal in beauty and artistic excellence to anything ever seen in a periodical. They are art gems.

A NEW METHOD OF TREATING DISEASE.

HOSPITAL REMEDIES.

What are they? There is a new departure in the treatment of disease. It consists in the collection of the specifics used by noted specialists of Europe and America, and bringing them within the reach of all. For instance the treatment pursued by special physicians who treat indigestion, stomach and liver troubles only, was obtained and prepared. The treatment of other physicians, celebrated for curing catarrh was procured, and so on till these incomparable cures now include disease of the lungs, kidneys, female weakness, rheumatism and nervous debility.

This new method of "one remedy for one disease" must appeal to the common sense of all sufferers, many of whom have experienced the ill effects, and thoroughly realize the absurdity of the claims of Patent Medicines which are guaranteed to cure every ill out of a single bottle, and the use of which, as statistics prove, has ruined more stomachs than alcohol. A circular describing these new remedies is sent free on receipt of stamp to pay postage by Hospital Remedy Company, Toronto, Canada, sole proprietors.



THE BEST ARE THE CHEAPEST.

New York

MILLERS' FLOUR SACKS A SPECIALTY.

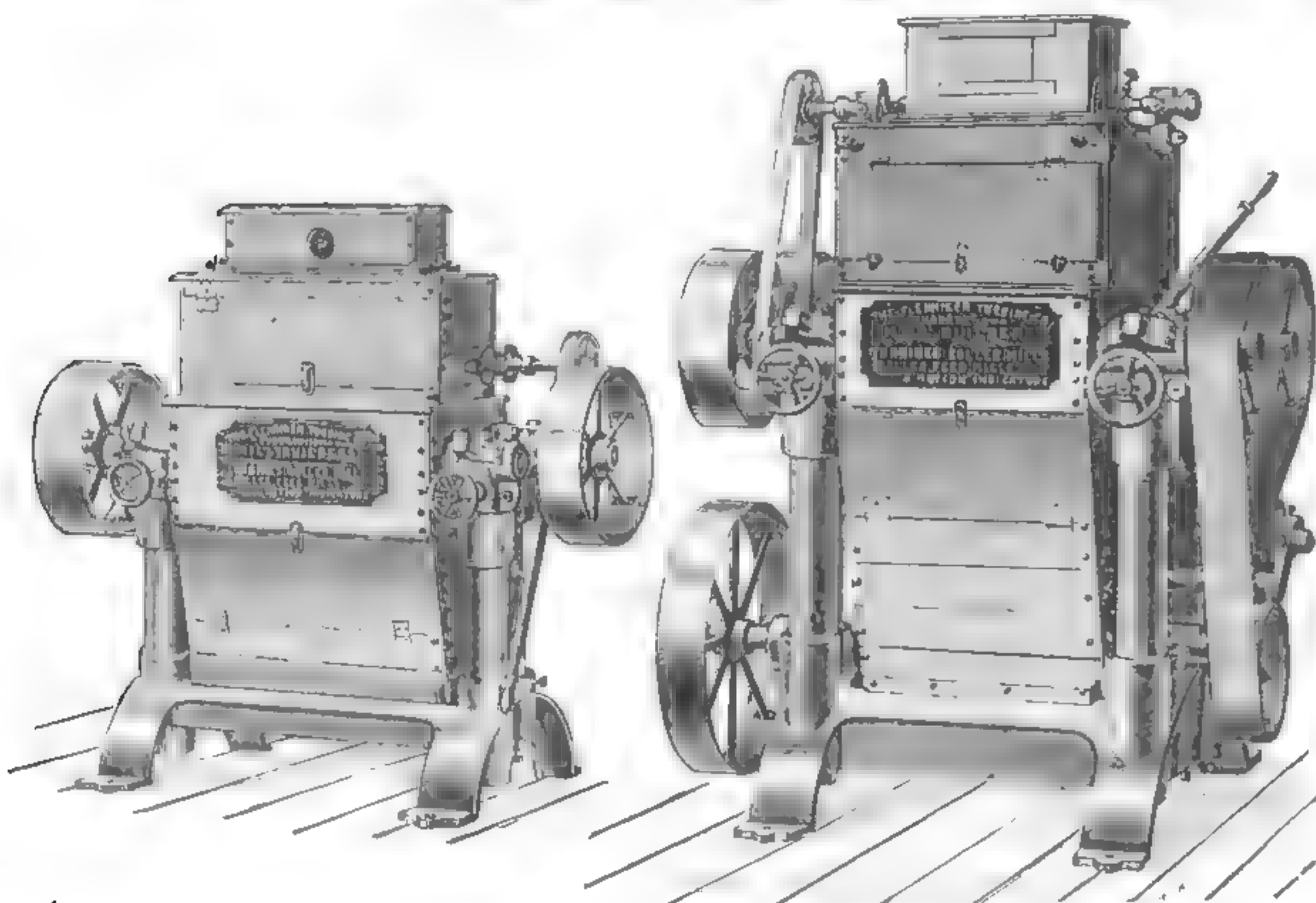
THE PATRONAGE of the MILLING TRADE is MOST RESPECTFULLY SOLICITED.

ONE REDUCTION TO THE FRONT!

*Ye jolly millers, one and all,
Who granulate with burrs,*

A Moses has Come to Deliver You from Egypt. Cease
Trying to Make Bricks without Straw. The Red
Sea of Expense Has Been Divided.

**The Wilderness of Reductions has Been Shortened. There
is Manna in Abundance for Those Who Believe.
Listen to the Glad Tidings of Great Joy!**



**ONE REDUCTION ON ROLLS IS
A SUCCESS!** Two years of ex-
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of Wheat and diversified climates, has
justified us in recommending its adop-
tion in place of burrs in each and every
case, whether for grinding Wheat, Rye
or Buckwheat. We have perfected Roller
Mills, Bolts and Scalpers peculiarly
adapted to the wants of Small Mills, and
all our machines *infringe no patents*, and
no claims are made that they do.

Having consummated a bargain with
MR. O. C. RITTER, the author and pa-
tentee of **One Reduction**, which gives
us the *exclusive right* to construct mills
under his patents, our patrons in the
future will receive a license from Mr.
Ritter.

SPECIALTIES! { Graham Roller Mills, Round Reels and Scalpers,
Sectional Round Reels, Grain Separators, Motion
Indicators. Before buying any of these machines
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Second-Hand Machinery, and Bargains in Every Line.

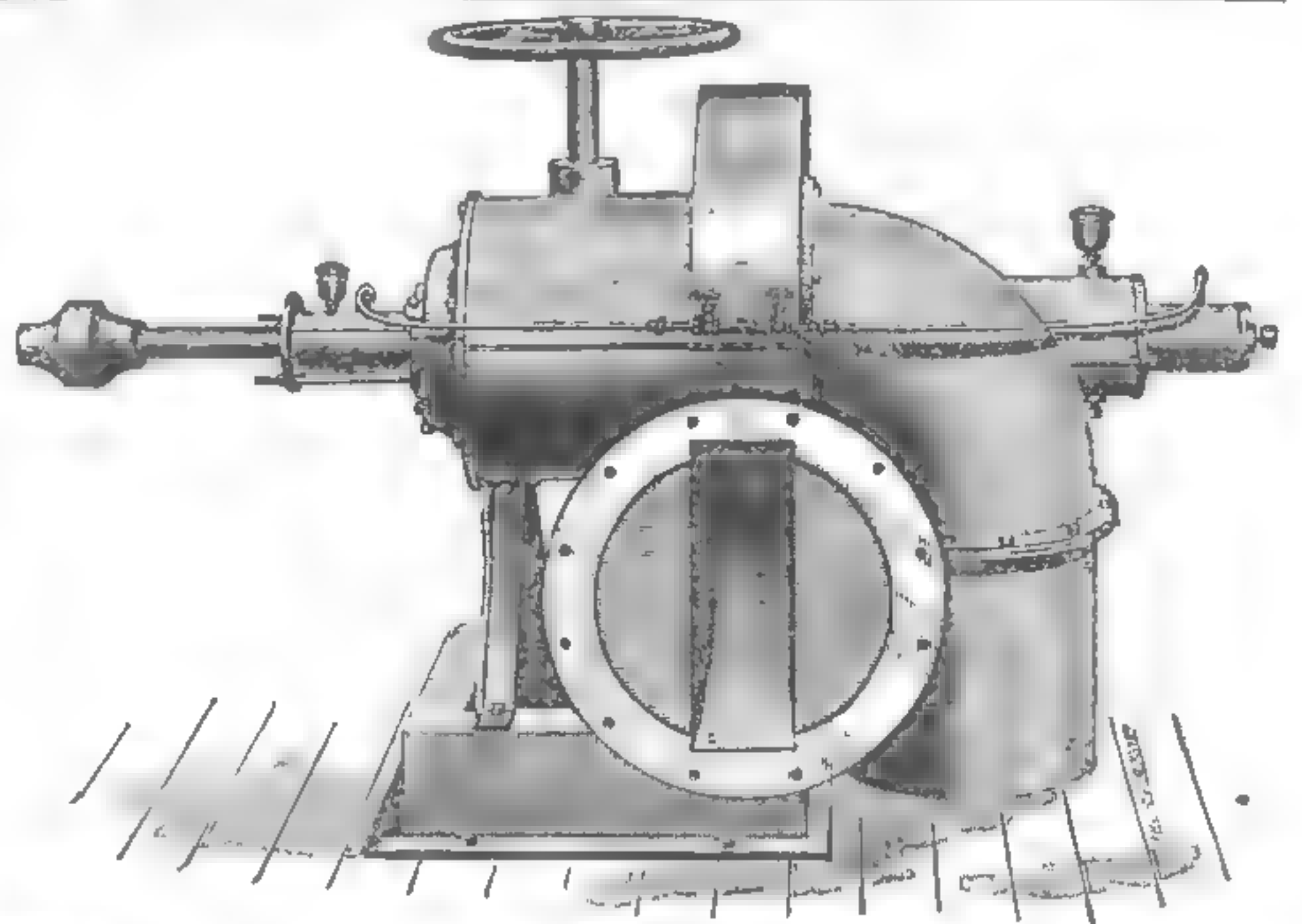
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VERTICAL OR HORIZONTAL,
With or Without Iron Flumes,

—BUILT BY THE—

Flenniken Turbine Co.
DUBUQUE, - IOWA.



EUROPEAN ECHOES.

FROM Russia supplies of wheat are freely shipped, but most of the customers are outside English trade.

THE general prospect of the crops in Europe is very fine. The prospects in France have seldom been better. In Germany the growing crops have a most promising appearance. In Russia the grain prospects have been steadily improving during the month.

THE fourth annual Convention of the Meunerie Française, or Association of French Millers, will be held on the 16th, 17th and 18th of September next at the Champs Elysees, in the Pavilion of the City of Paris. As last year, this meeting will include an exhibition of cereal products and of milling, baking and agricultural machinery. A full programme of the agenda, with the papers to be read and subjects to be discussed, will be furnished on application by the secretary of the Association Nationale de la Meunerie Française, Place du Louvre, 6, Paris.

HOW CORN SMUT IS SCATTERED.

Professor Halsted, writing on smut in corn, points out that smut can not get into the corn except at a particular time, that is, when the corn is coming up, and only at the most delicate part of the young stem near where it joins the root. If the corn escapes infection till it is well under way, it is safe from smut. Again, the growth of the smut is not at all external but is entirely inside the corn stalk and ears. It does not burst out until the spores are matured, the growth completed. Hence the smut, if once in the corn, need not be seriously retarded by a dry season, even if it is not favored by it. The smut gains entrance into the corn when it is coming up, providing the spores are present and circumstances are favorable to their germination. One of the essentials is sufficient moisture. According to Prof. Halsted's record, the only good rain in the spring of 1887 was on June 13. The corn was probably late on account of the drouth, and it is easy to suppose that it was coming up about this time, and that the rain came just at the right time to favor the smut spores which were in the soil. In Illinois the spring of 1889 was similarly dry, like the summer, the only rain of any consequence coming in the latter part of May. Prof. Halsted says the smut was much worse the second year than the first. Why? Recent discoveries by a German investigator, Brefeld, show that the corn-smut and other smuts may germinate in a solution of manure and grow, not in the same form as in the corn, but by means of budding, after the manner of the yeast-plant. The same has been observed in the dung of cattle that have eaten smutty corn. It may go on indefinitely, and doubtless does, in the manure-pile in which the spores have been scattered. Then when the manure is scattered over the field and corn is planted, the smut is ready to attack it. If the truth could be known, this would probably be Iowa's story in 1886-7: In 1886 the smut was bad; cattle ate smutty ears and stalks;

smutty stalks and ears were thrown upon the manure-pile; the fungus multiplied by budding till it was scattered through the whole pile; the manure was put on the field, the corn was planted, and the rain came just as it was coming up; the smut was three times as abundant in 1887, Prof. Halsted says, as in 1886. What will be the story in Illinois in 1890?

COTEMPORARY COMMENT.

Please do not forget the international meeting of millers at Chicago in 1893. Millers of the earth, moon, sun, planets and stars, you are all invited. Come early, and see the big yielders before they are enticed away by officers of the law.—Chicago "American Miller."

It affords food for reflection to see mills fitting out with break-rolls and stones for middlings, as many are now doing in the Southwest. If this keeps up there will soon again be a good demand for new buhrs in this country. * * * Some millers have tried scattering dry bricks through a bin of wheat to extract the moisture in seasons when the grain is very damp. Brick may be cheaper than a grain-dryer, but we should prefer the latter.—Kansas City "Modern Miller."

The situation at Washington does not seem to have improved, so far as Canadian interests are concerned. The McKinley tariff, the Interstate Commerce Act and the Select Committee on Canadian Relations are all more or less inimical to this country, and the operations and recommendations will tend to curtail our intercourse with the south.—Montreal "Journal of Commerce."

One of the laws recently passed by the North Dakota Legislature requires elevator men to pay an annual license of \$250 per 1,000 bushels' capacity of their elevators, on August 1 of each year. The law, of course, was passed to satisfy the farmers, but the legislators were so blinded by prejudice that they were unable to see that a tax upon the grain trade is a tax upon the farmer. It is said that the elevator men will retaliate by refusing the fifteen days' free storage heretofore allowed where grain was taken to the elevator and not sold. In such an event farmers say they will petition the railroad companies for side tracks, platforms and cars and do their own shipping.—Chicago "American Elevator."

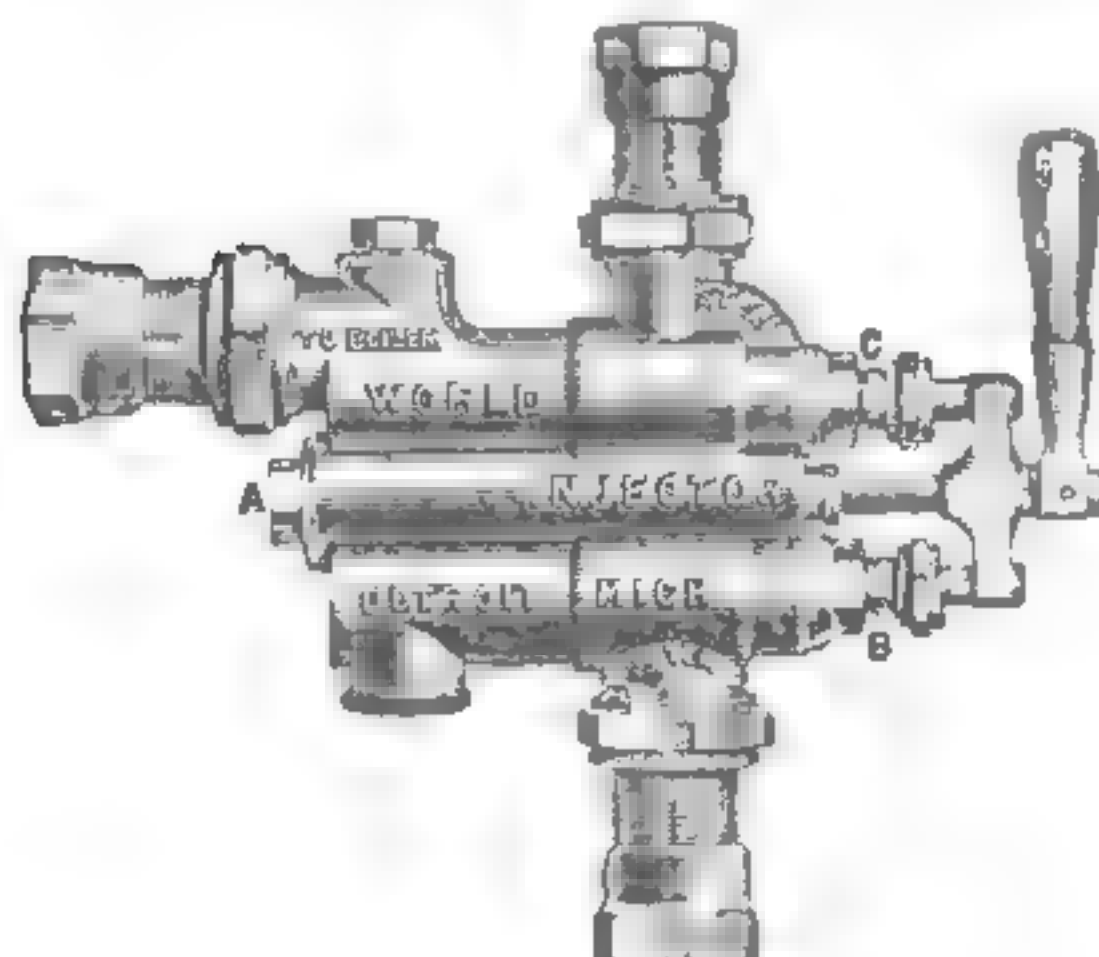
CATARRH.

CATARRHAL DEAFNESS—HAY FEVER.
A NEW HOME TREATMENT.

Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and eustachian tubes. Microscopic research, however, has proved this to be a fact, and the result of this discovery is that a simple remedy has been formulated whereby catarrh, catarrhal deafness and hay fever are permanently cured in from one to three simple applications made at home by the patient once in two weeks.

N. B.—This treatment is not a snuff or an ointment; both have been discarded by reputable physicians as injurious. A pamphlet explaining this new treatment is sent free on receipt of stamp to pay postage, by A. H. Dixon & Son, 337 and 339 West King street, Toronto, Canada.—Christian Advocate.

Sufferers from Catarrhal troubles should carefully read the above.

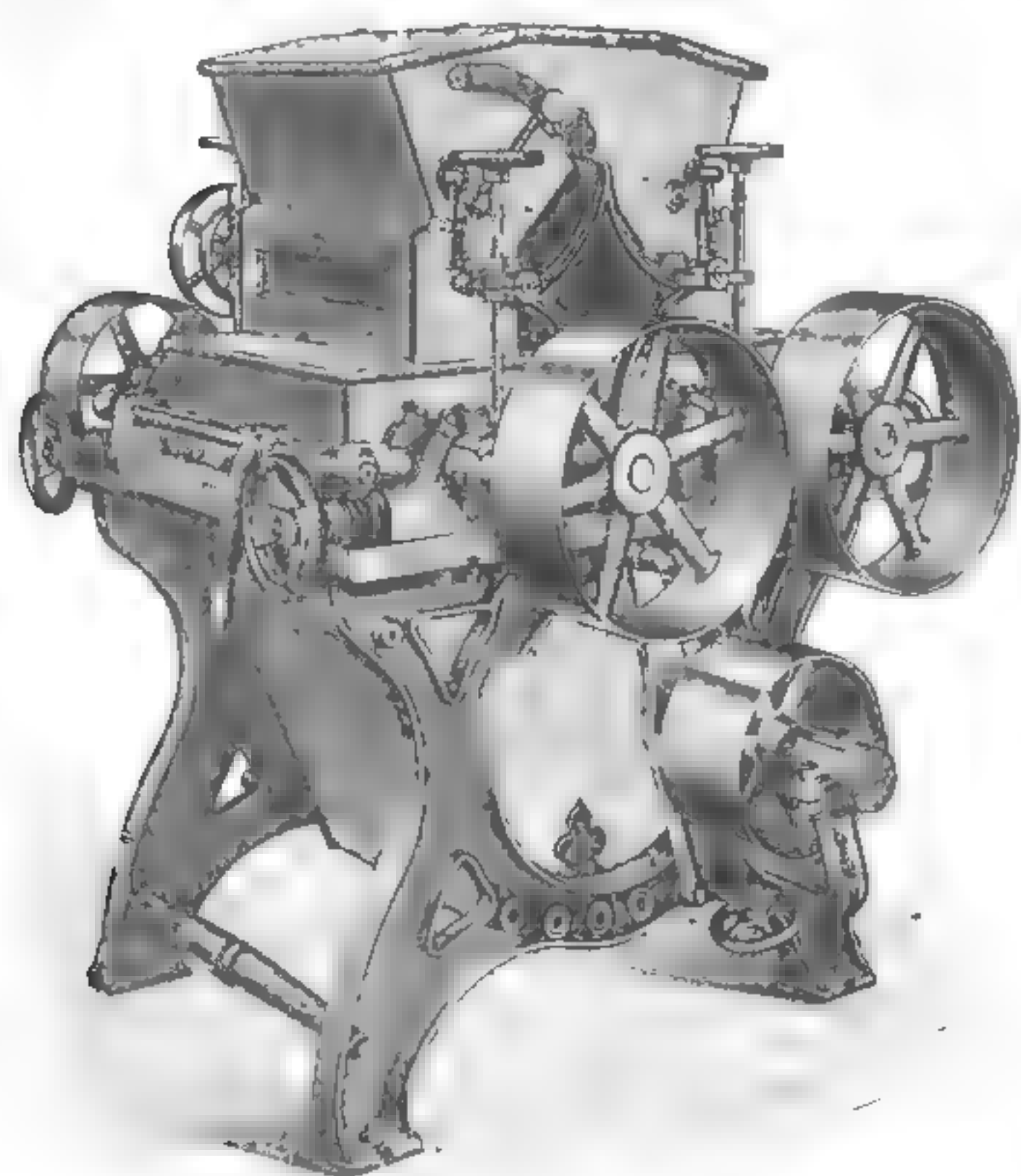


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175 Larned Street West, DETROIT, MICH.

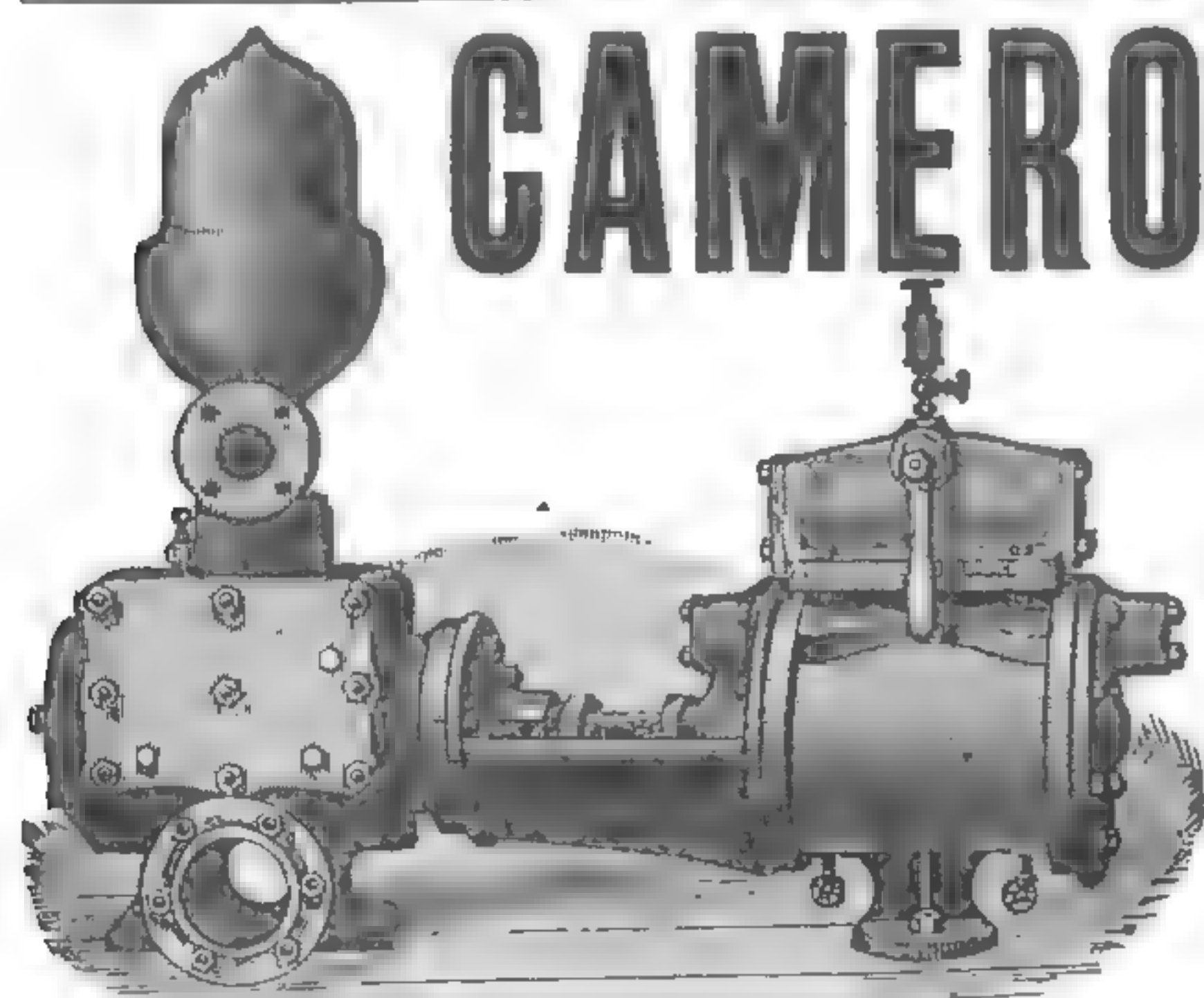


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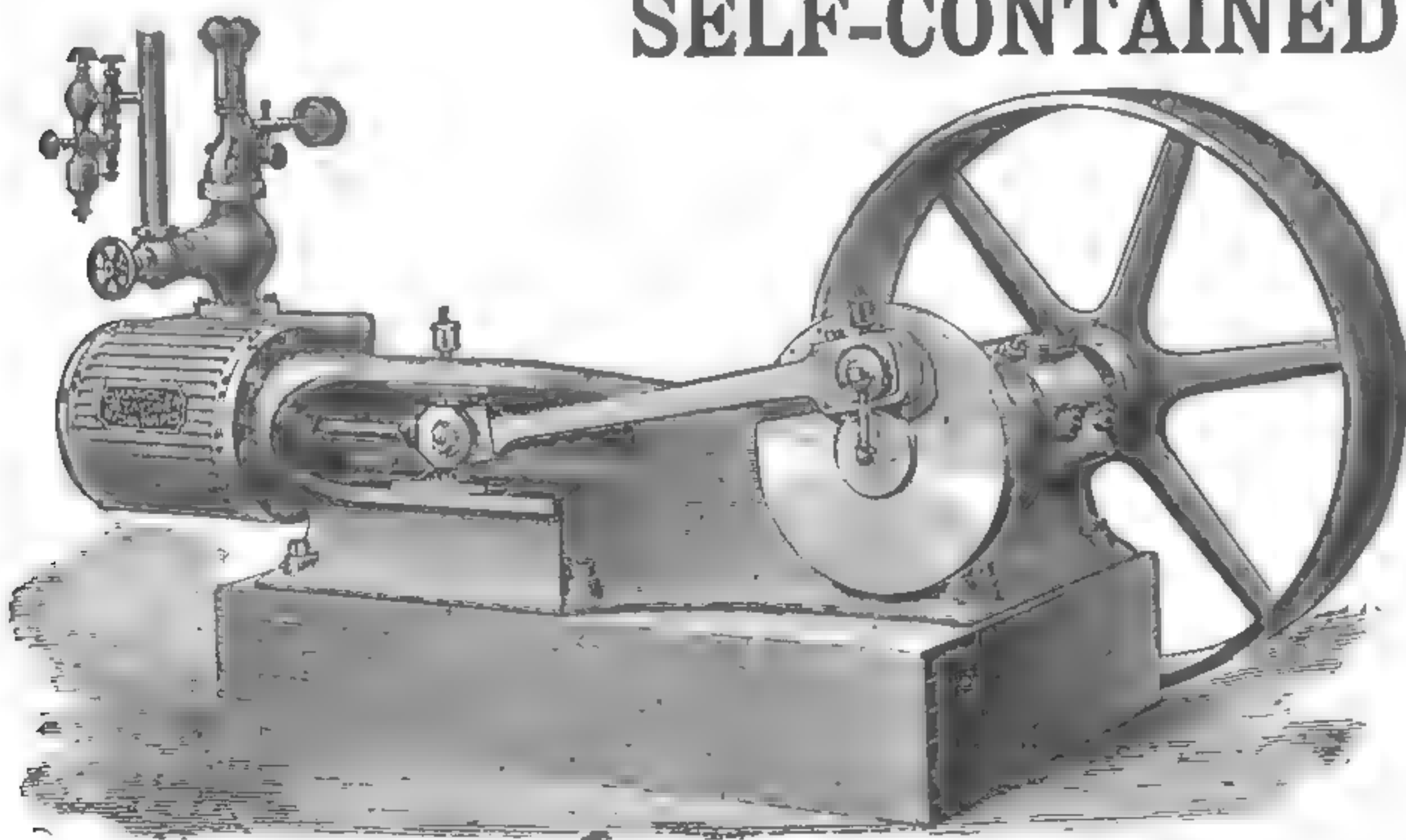
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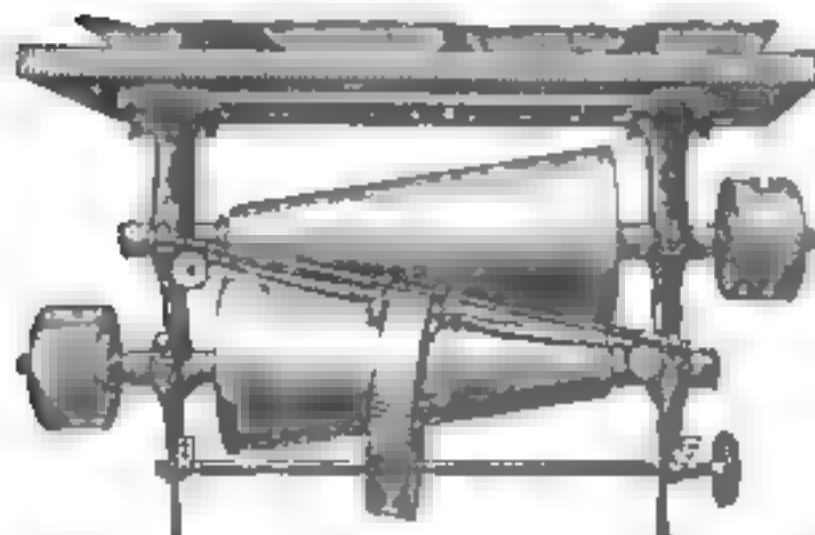
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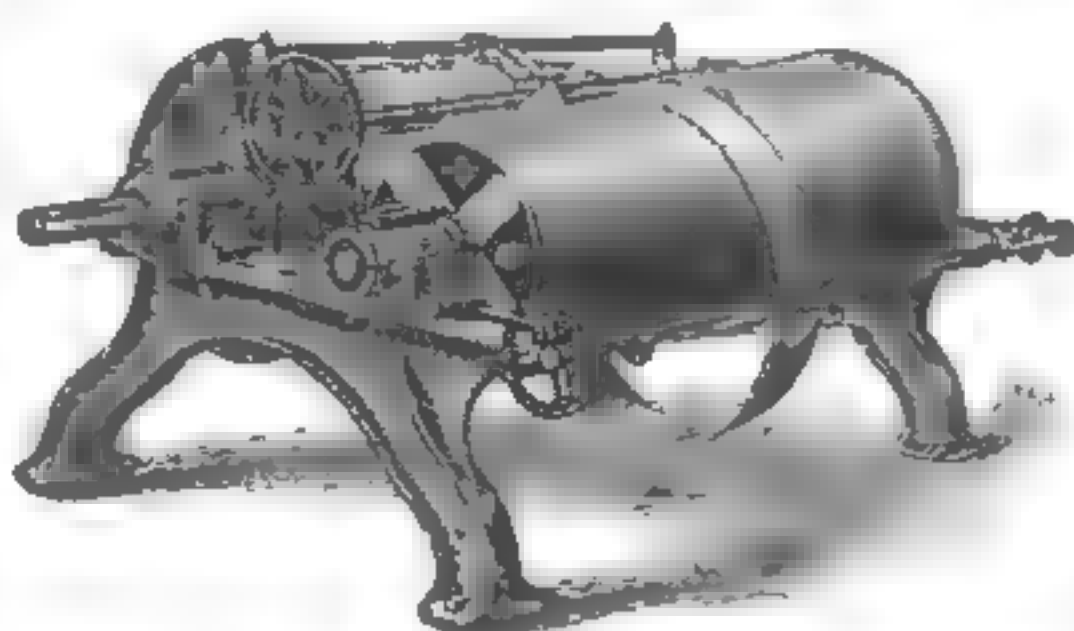
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This cut represents a set of hanging cone pulleys. This pattern is intended for that class of machinery that stops and starts at the same speed, and at the same time be able to change the speed more or less while running. These cones are also fitted with a governor where a steady motion is required and the initial power is

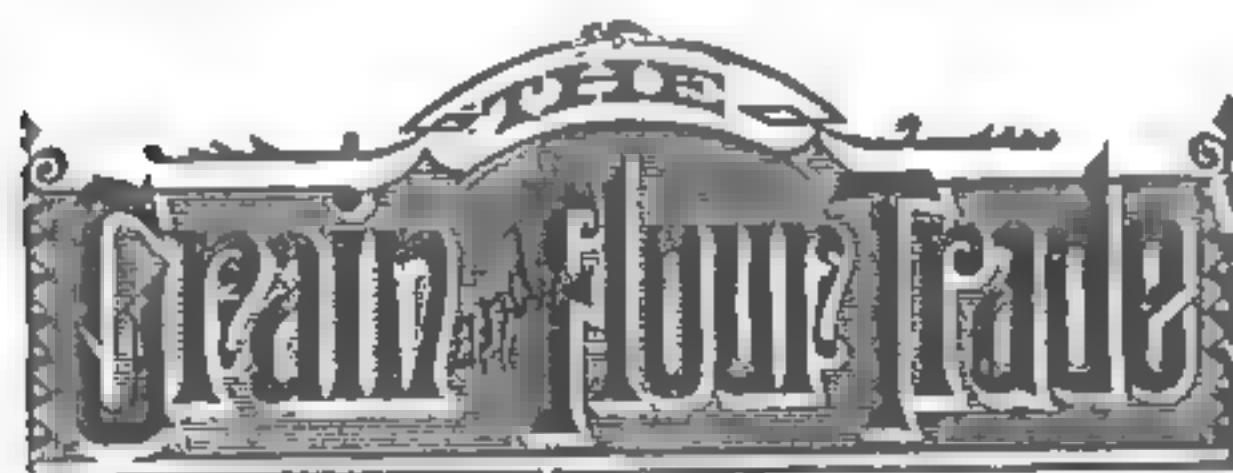


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OFFICE OF THE MILLING WORLD,
BUFFALO, N. Y., June 28, 1890.

Friday of last week was a day of mixed markets, dull and strong at opening and easy at closing, on selling by longs. In New York June wheat closed at 94c., with Atlantic port receipts 63,734, exports 9,934, and options 1,100,000 bushels. June corn closed at 41½c., with receipts 214,445, exports 233,299, and options 560,000 bushels. June oats closed at 34½c., receipts 330,285, exports 70,794, and options 300,000 bushels. Wheat flour was in buyers' favor. Receipts were 6,557 sacks and 24,337 barrels. The minor lines were featureless. Tennessee, Kentucky and the entire Northwest reported too much rain.

Saturday brought dull and easier wheat markets. Cables were dull and generally steady. Western reports on rain were bullish in tone. June wheat closed at 93¾c., with receipts 58,718, exports 39,448, and options 675,000 bushels. June corn closed at 41c., with receipts 218,136, exports 341,255, and options 520,000 bushels. June oats closed at 34¼c., with receipts 319,824, exports 43,286, and options 130,000 bushels. Wheat flour was dull, with only a small home trade and exporters 12 to 24 cents under the New York market. Receipts were 7,105 sacks and 14,847 barrels, and exports 5,845 sacks and 1,775 barrels. The minor lines were quiet.

Monday brought dull and lower markets, on fine weather reports from the West, on better receipts, and on a good beginning of the winter wheat harvest in the South and the Southwest. June wheat closed at 93¾c., with receipts 8,350, exports 16,830, and options 2,128,900 bushels. June corn closed at 41c., with receipts 73,875, exports 141,502, and options 600,000 bushels. June oats closed at 33½c., with receipts 61,097, exports 153,248, and options 345,000 bushels. Wheat flour was dull, easy and irregular. Receipts were 505 sacks and 15,965 barrels, and exports 10,617 sacks and 3,570 barrels. The minor lines were quiet and featureless. The visible supply in the United States and Canada were:

	1890. June 21.	1889. June 22.	1888. June 23.
Wheat.....	21,088,719	16,448,888	24,602,533
Corn.....	15,621,320	9,834,399	12,589,754
Oats.....	5,001,147	5,574,971	5,658,574
Rye.....	683,770	968,877	236,718
Barley.....	479,830	328,878	175,174

Tuesday brought dull and easier markets at opening, and stronger at closing, on mixed reports and on a decrease of 1,432,000 bushels of wheat on passage. June wheat closed at 93¾c., with receipts 38,723, exports 7,247, and options 2,808,009 bushels. June corn closed at 40¾c., receipts 154,476, exports 320,527, and options 1,016,000 bushels. June oats closed at 33½c., with receipts 214,227, exports 110,164, and options 315,000 bushels. Wheat flour was in better demand at late bottom prices for large lines, with less pressure to sell. Receipts were 3,880 sacks and 14,844 barrels, and exports 7,371 sacks and 8,610 barrels. The minor lines were featureless.

Wednesday brought lower opening markets on longs selling out on fine weather and better crop reports, and rallying later on good short and export demand. June wheat closed at 93c., with receipts 20,132, exports 76,403, and options 2,464,000 bushels. June corn closed at 40¾c., with receipts 290,010, exports 153,688, and options 2,120,000 bushels. The corn crop is reported to be in good condition generally. June oats closed at 33½c., with receipts 138,304, exports 50,500, and options 500,000 bushels. Rye grain was in improved demand at 55½c. for Western and Canada, and 57c. for State. Malt was better at 85c. for city-made Can-

ada, 80c. for country do, 75c. for six-rowed and 68c. for two-rowed. Mill-feed was dull and easier, with sellers at 62½c. for 40, 60 and 80-lbs., and buyers only at 60c. 62½c., with 65c. the two extremes on 100-lbs. and sharps, but chiefly 70c. Sales, 140 tons 40 and 60-lbs. at \$14.00.

Wheat flour was very irregular, and trade was more active for both trade and export grades, at concessions on the latter; and in cases on the former, especially on clear springs and rye mixtures in barrels, while straight winters and patent, as well as spring patents and straights, were steadier, with more demand on spot and to arrive from the large jobbers and bakers, who bought quite freely of both. No. 2 winters, in sacks, \$2; straight winter \$4.40; clear winter \$4.30; super winter, in barrels, \$2.70, which are steady prices; super, in barrels, \$2.55 for a pretty good flour, which was a shade easier; clear springs, \$3.75@4.00, in barrels, part rye mixtures, and at unchanged bidding prices that have hitherto been refused; spring clear, \$3.75, in sacks, export, spot; winter straights, \$4.40, and 300 clear do, \$4.10 spring No. 2, \$2.75, in sacks; bakers spring, c.i.f. to United Kingdom, to arrive in July, p.t., quoted about 21s. 6d., and choice bakers' spring at 22s. 6d. for July shipment, while August do. were offered at only 3d. more. Receipts were 2,964 sacks and 20,315 barrels, and exports 3,600 sacks and 20,666 barrels.

Corn products were rather quiet at the following quotations: Coarse bag meal 79c. 82c.; fine yellow 95c. \$1; Southern and Western in barrels \$2.30@2.40; yellow granulated \$2.55@2.60; white do. \$2.65@2.70; flour \$2.95@3.20; Brandywine \$2.50. Rye flour was quiet at \$3.00@3.20.

Thursday brought slight changes in market conditions. June wheat closed at 92¾c., with receipts 112,000, exports 230,000, and options 2,744,000 bushels. June corn closed at 40¾c., with receipts 362,000, exports 166,000, spot sales 378,000, and options 738,000 bushels. June oats closed at 33½c., with receipts 168,000, spot sales 144,000, and options 105,000 bushels. Wheat flour was steady and active. Receipts were 7,566 packages, and sales 21,880 barrels. Sales were made at the following prices: Low extras \$2.35@2.90; city mills \$4.35@4.50; city mill patents \$4.65@5.25; winter wheat low grades \$2.35@2.90; fair to fancy \$3.00@4.65; patents \$4.25@5.25; Minnesota clear was \$3.50@4.50; straights \$3.65@4.75; Minnesota straight patents \$4.15@6.40; rye mixtures \$3.45@4.00; superfine \$2.00@2.75. The Minneapolis output last week was 82,500 barrels, and the week just ending promises an output of about 76,000 barrels. The minor lines were unchanged.

BUFFALO MARKETS.

WHEAT—The market opened strong at yesterday's closing and was higher at the close. Sales were made during the day of 8,000 bushels No. 1 hard at 92½c.,

6,000 at 92¾c. 15,000 c. i. f. at 92½c. 34,000 at 93¾c. 15,000 to arrive at 93¾c. 600 at 94¼c. and 1,200 at 94¼c. closing at 94¼c. asked; 1,200 bushels No. 1 Northern at 93¾c. closing at 93¾c.; 1,800 bushels No. 2 red at 90c. closing at 92c.; No. 1 White at 91c. also closing at 92c. asked; 1,200 bushels No. 2 white at 88c. and 600 extra No. 2 white at 88½c. CORN—The market opened quiet but hardened, and closed firm and higher. No. 2 yellow sold at 38¾c. No. 3 do at 38¾@38½c. No. 2 corn the same, and No. 3 corn at 37½c. No. 2 yellow was held at 39c. at the close. OATS—The opening was unsettled but the market closed strong. No. 2 white closed at 33¼@33½c. in store, and No. 2 mixed at 32½c. On track prices were half a cent higher. RYE—Quotations are nominal at 55@57c. in store. OATMEAL—Akron, \$4.95; Western, \$4.95 per bbl.; rolled oats, in cases, 72 lbs., \$3.25. CORNMEAL—Coarse, 75c. 85c.; fine, 80c. 90c.; granulated, \$1.50 per cwt. MILL-FEED—City-ground coarse winter, \$12.75@13.00 per ton; fine do. \$12.75@13.00; finished winter middlings, \$14.00@15.00; coarse spring do, \$12.25@12.75.

FLOUR MARKET.

Spring Wheat.	Winter Wheat.
Patents..... \$5.75@6.00	Patents... .. \$5.25@5.75
Straight..... 4.75@5.00	Straight.. ... 4.75@5.00
Bakers..... 4.25@4.75	Clear 4.25@4.75
Red Dog... 2.00@3.00	Low grades . 3.00@4.52
Rye flour ... 3.50@—	Graham 4.50@—

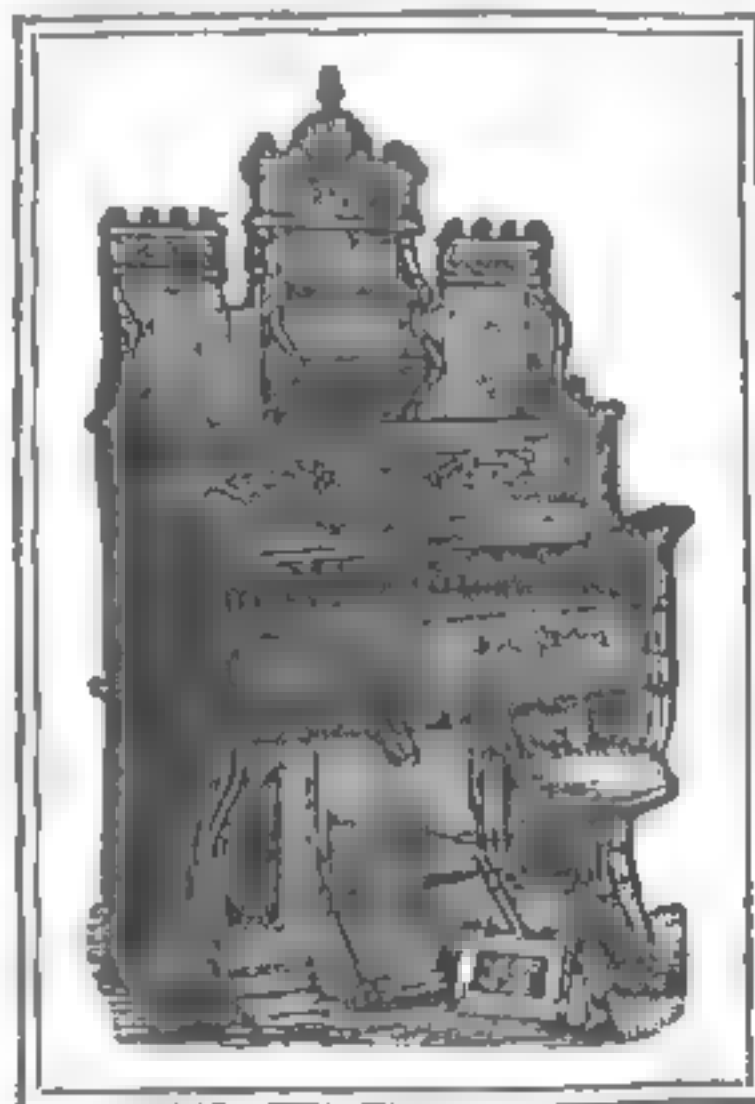
Retail prices 50c per bbl above these quotations.



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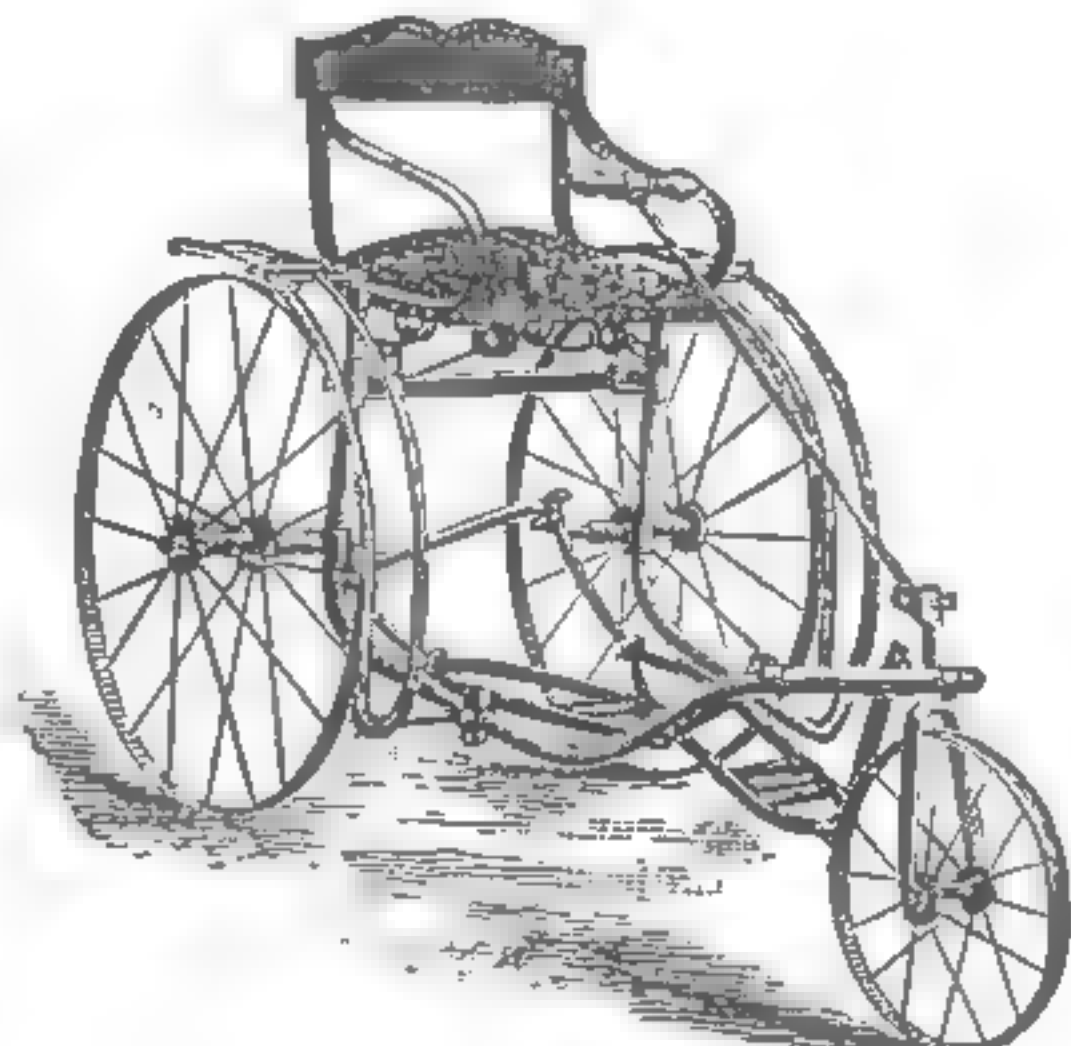
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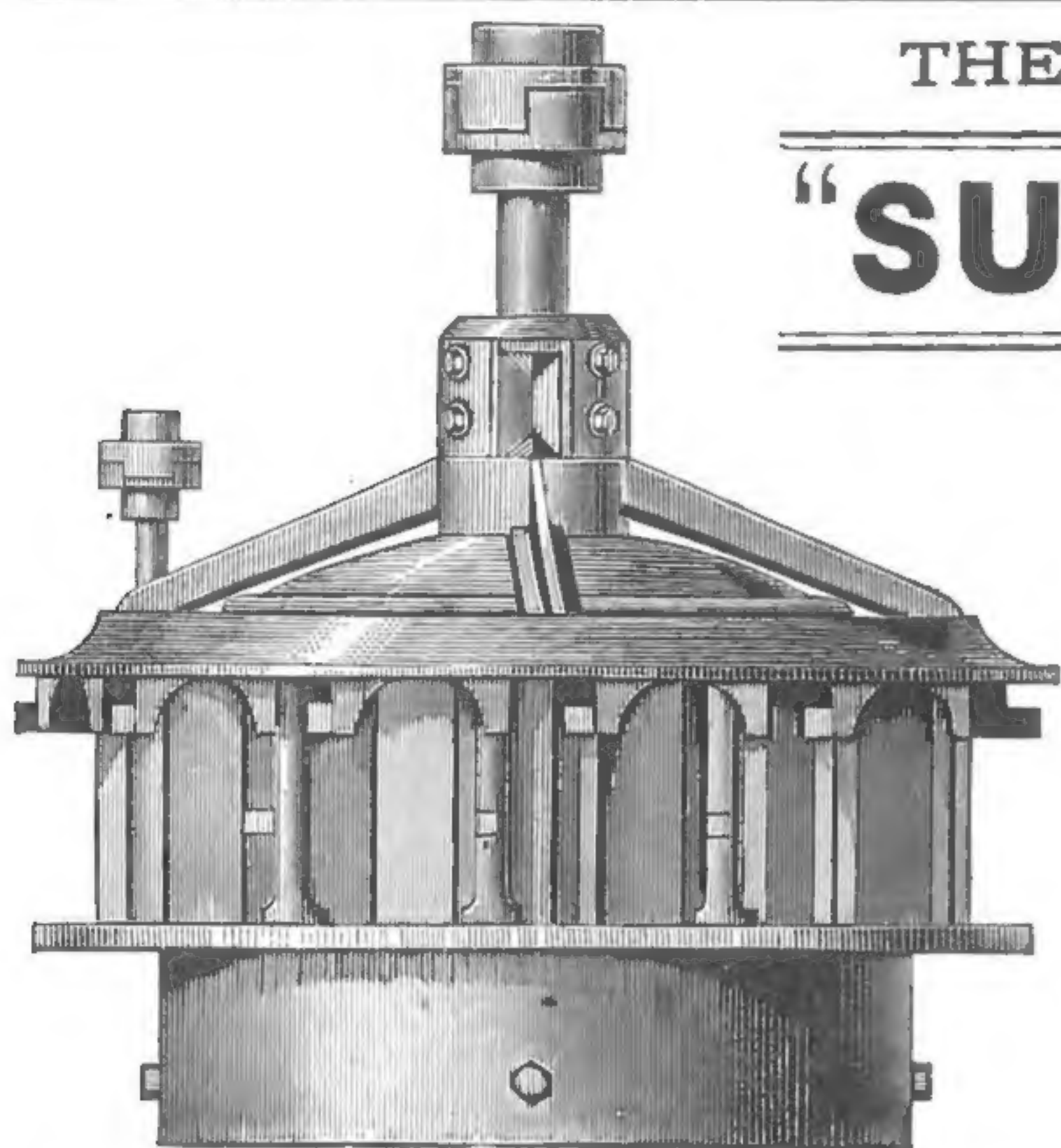
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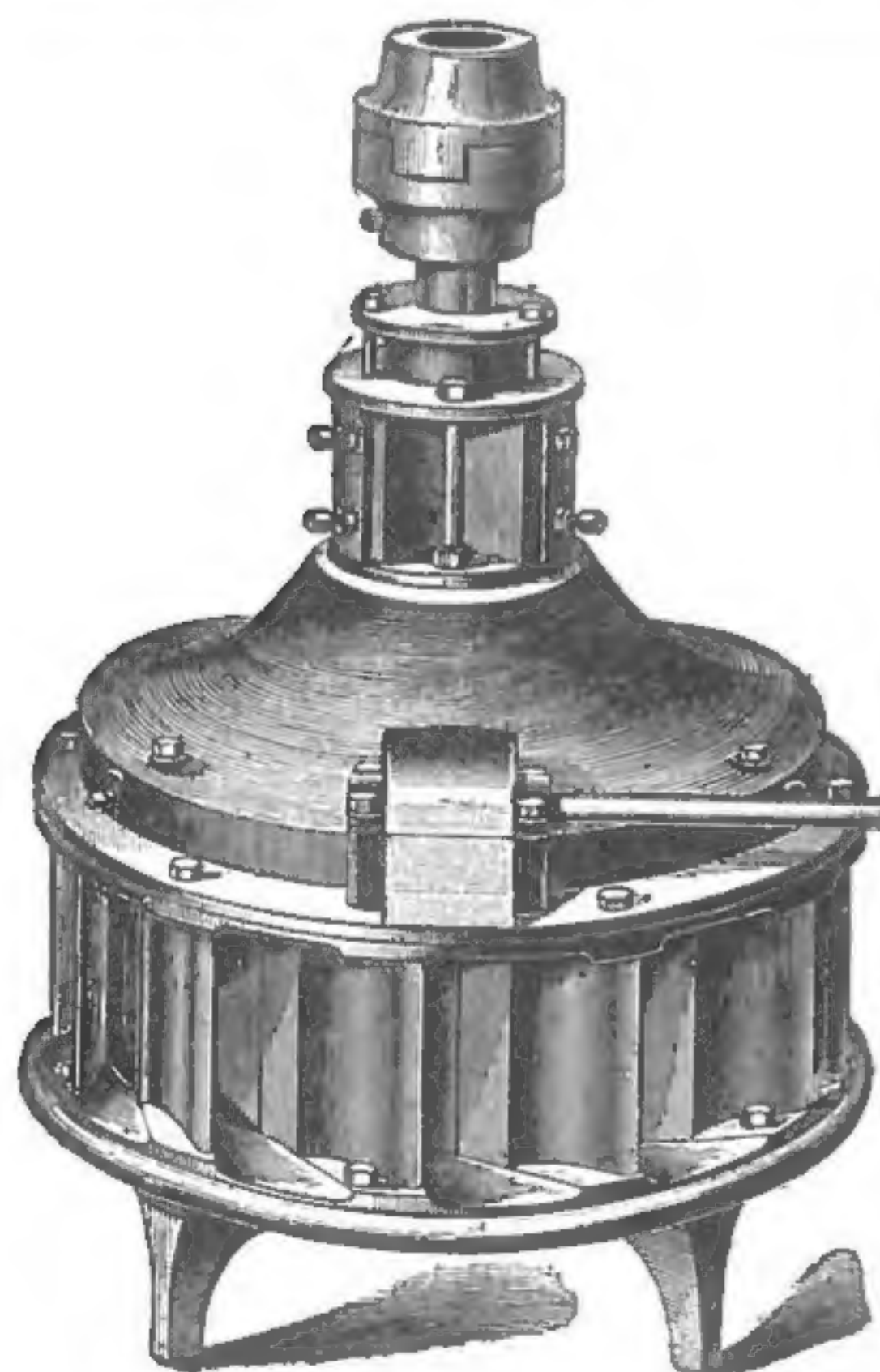
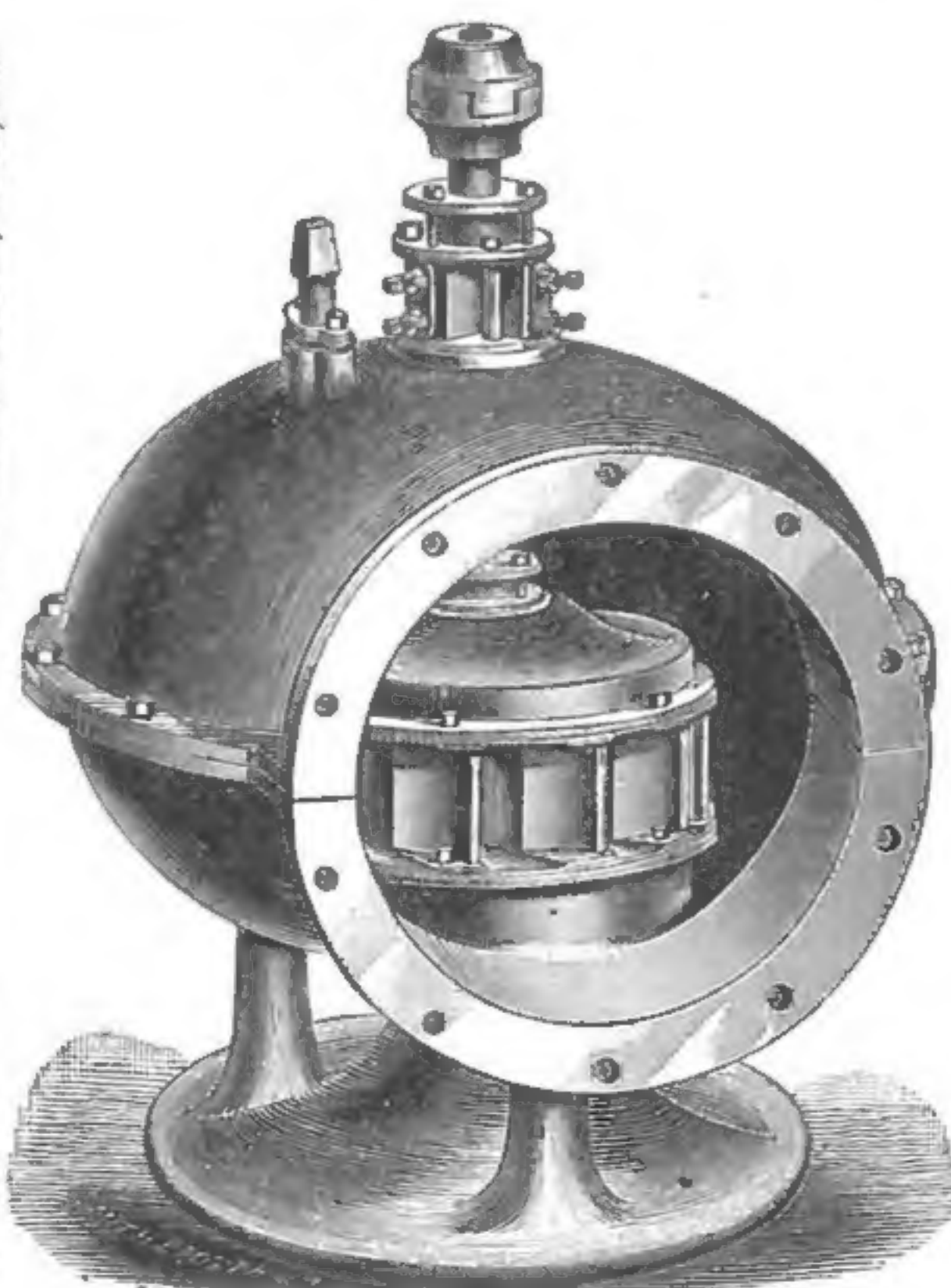
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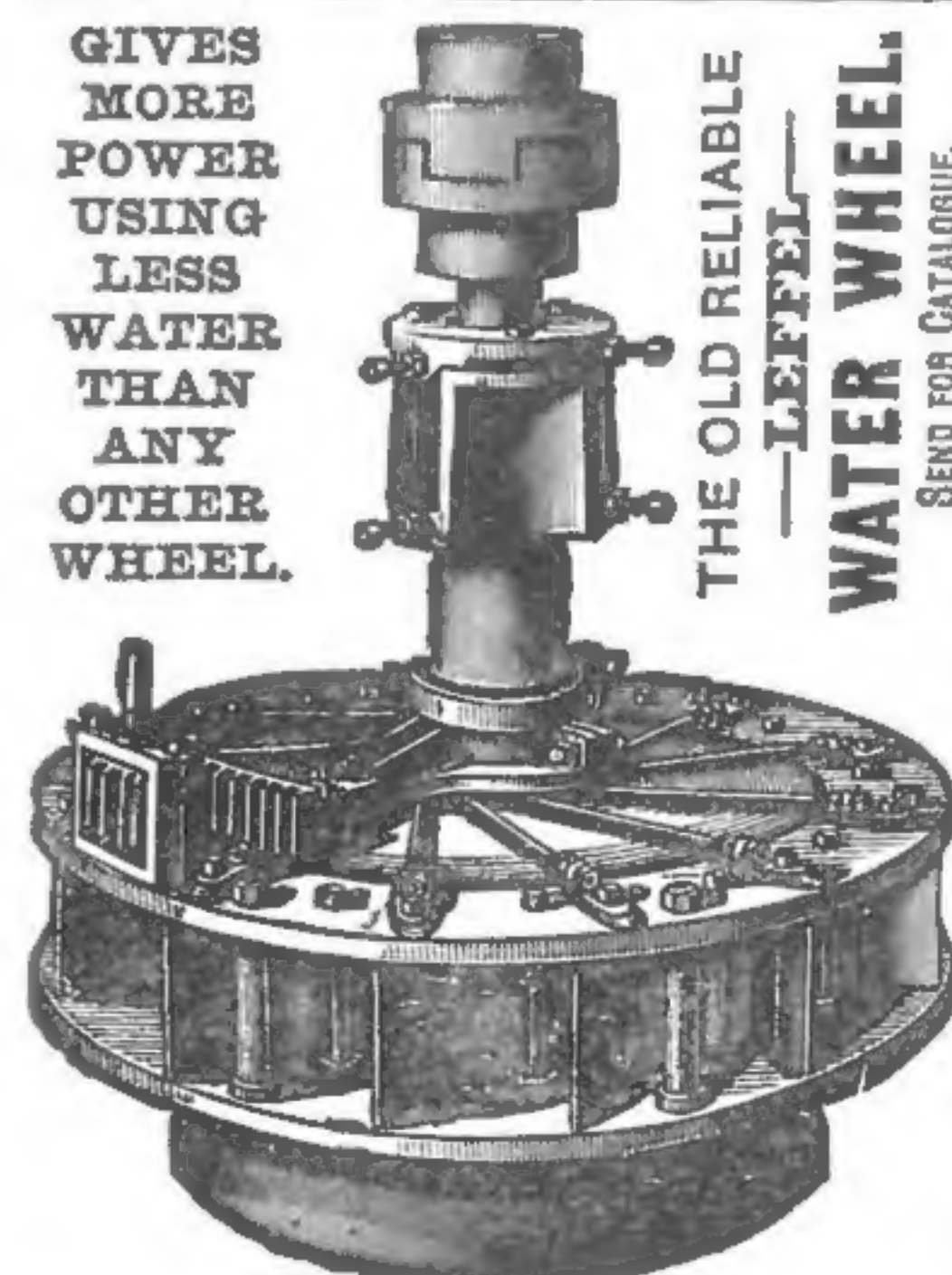
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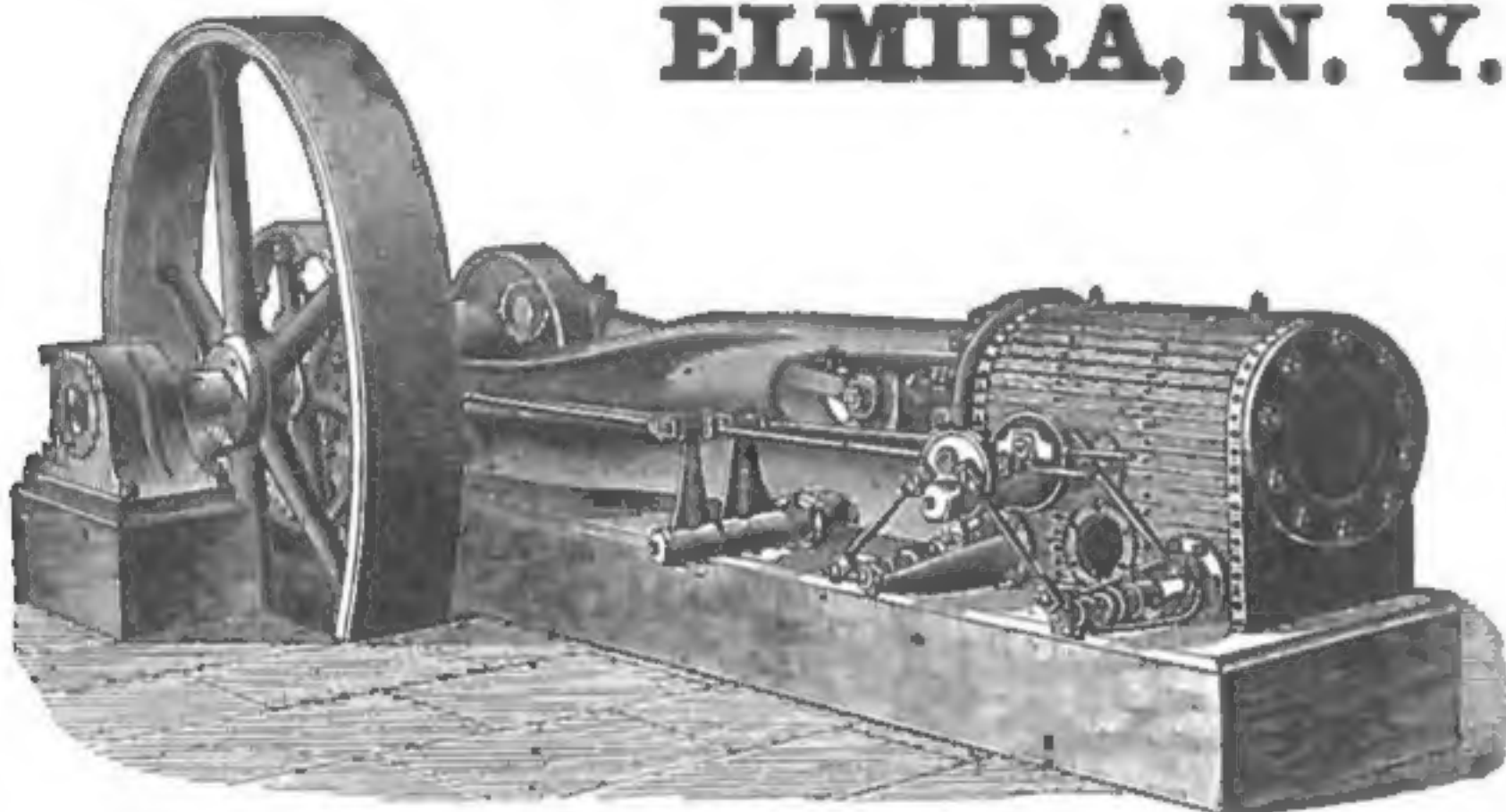
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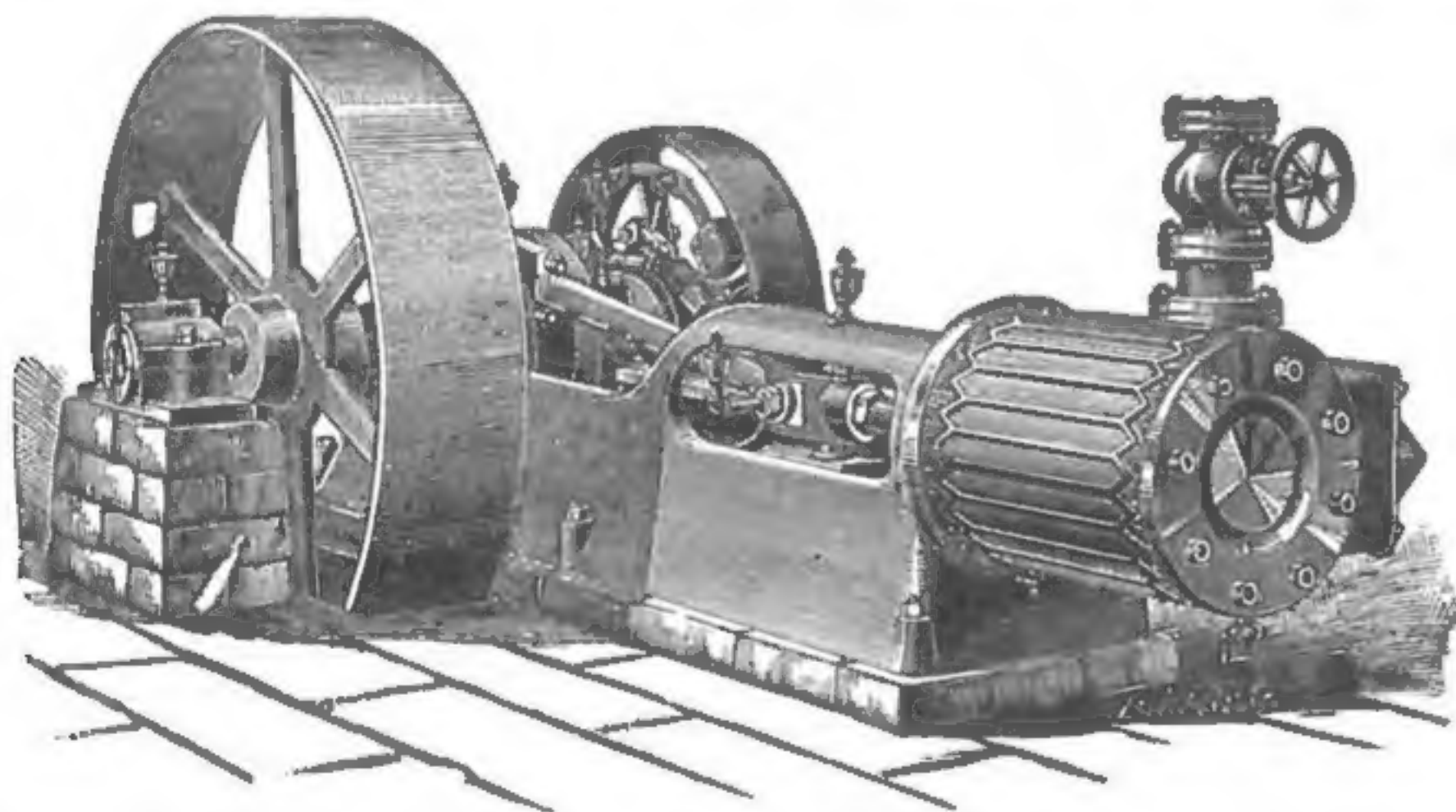
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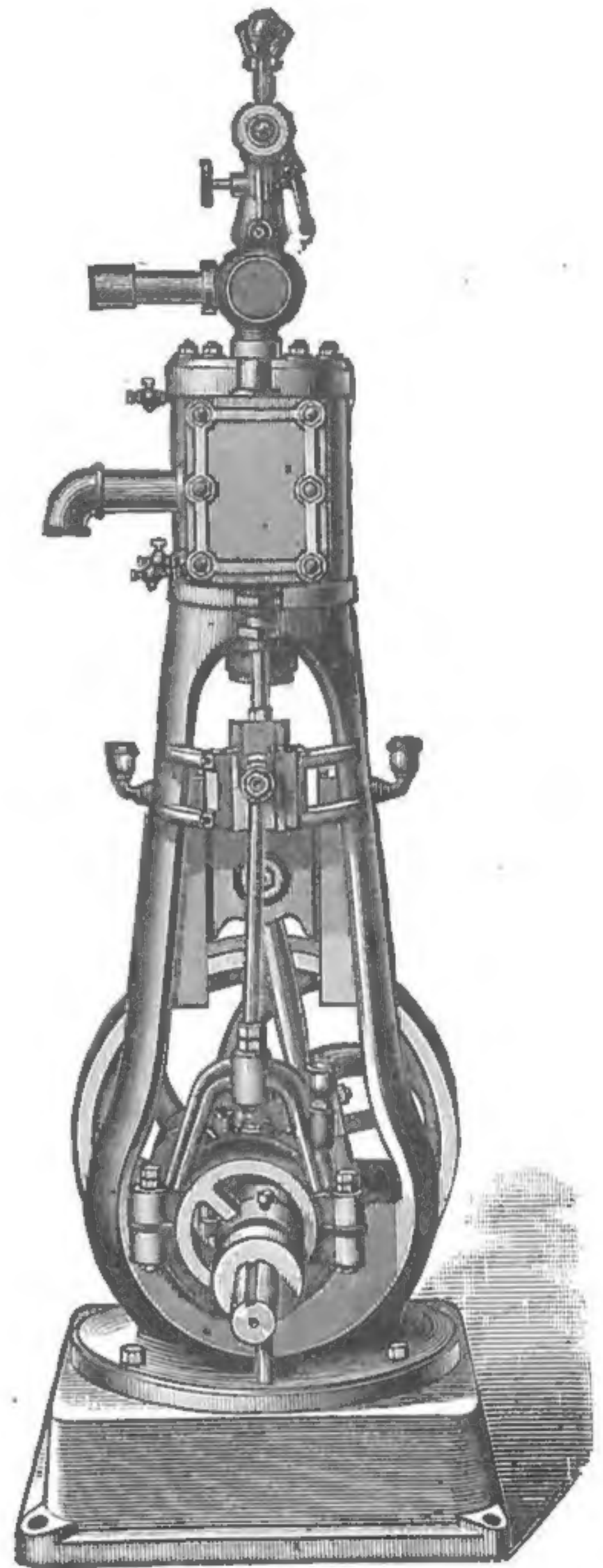
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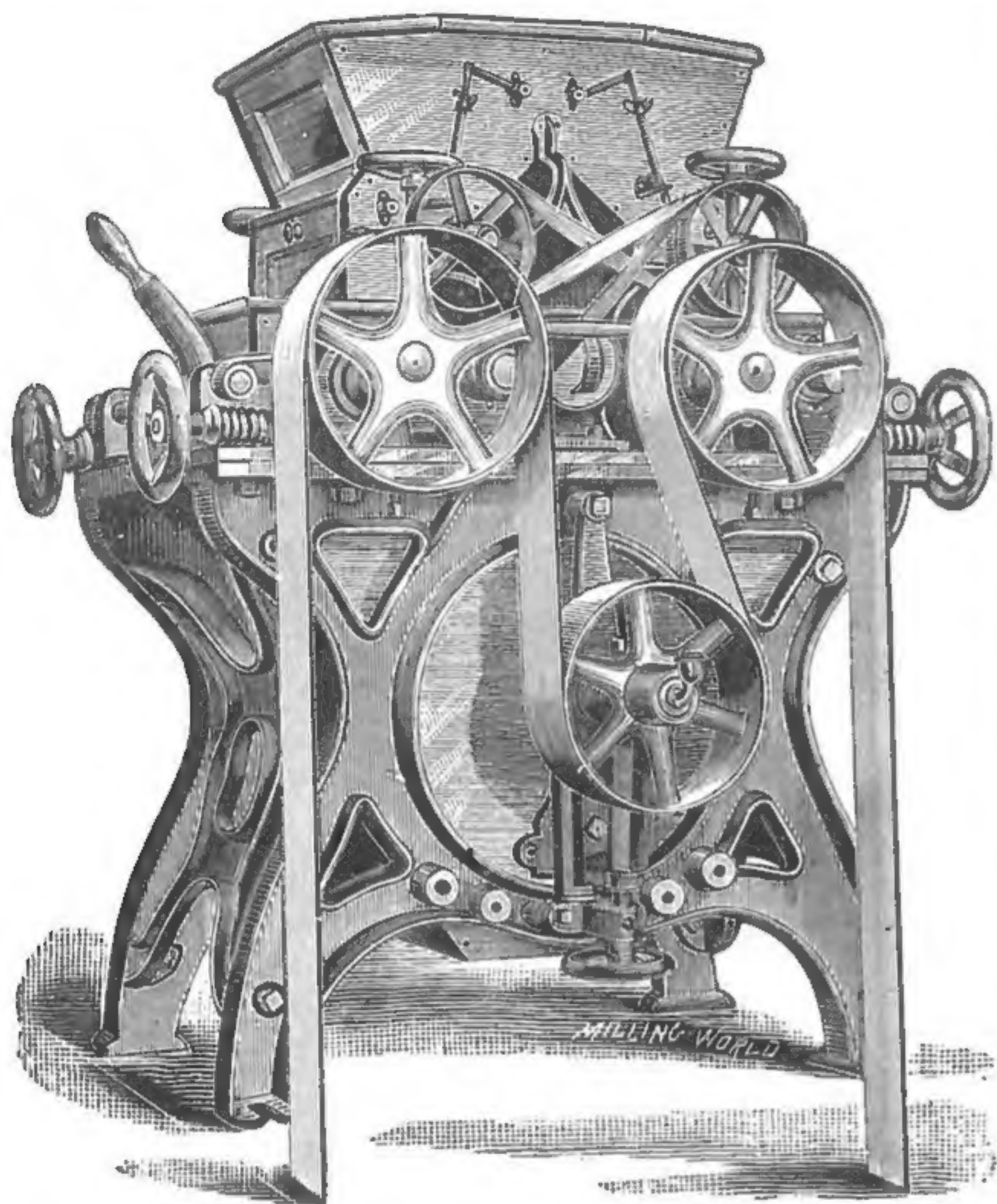


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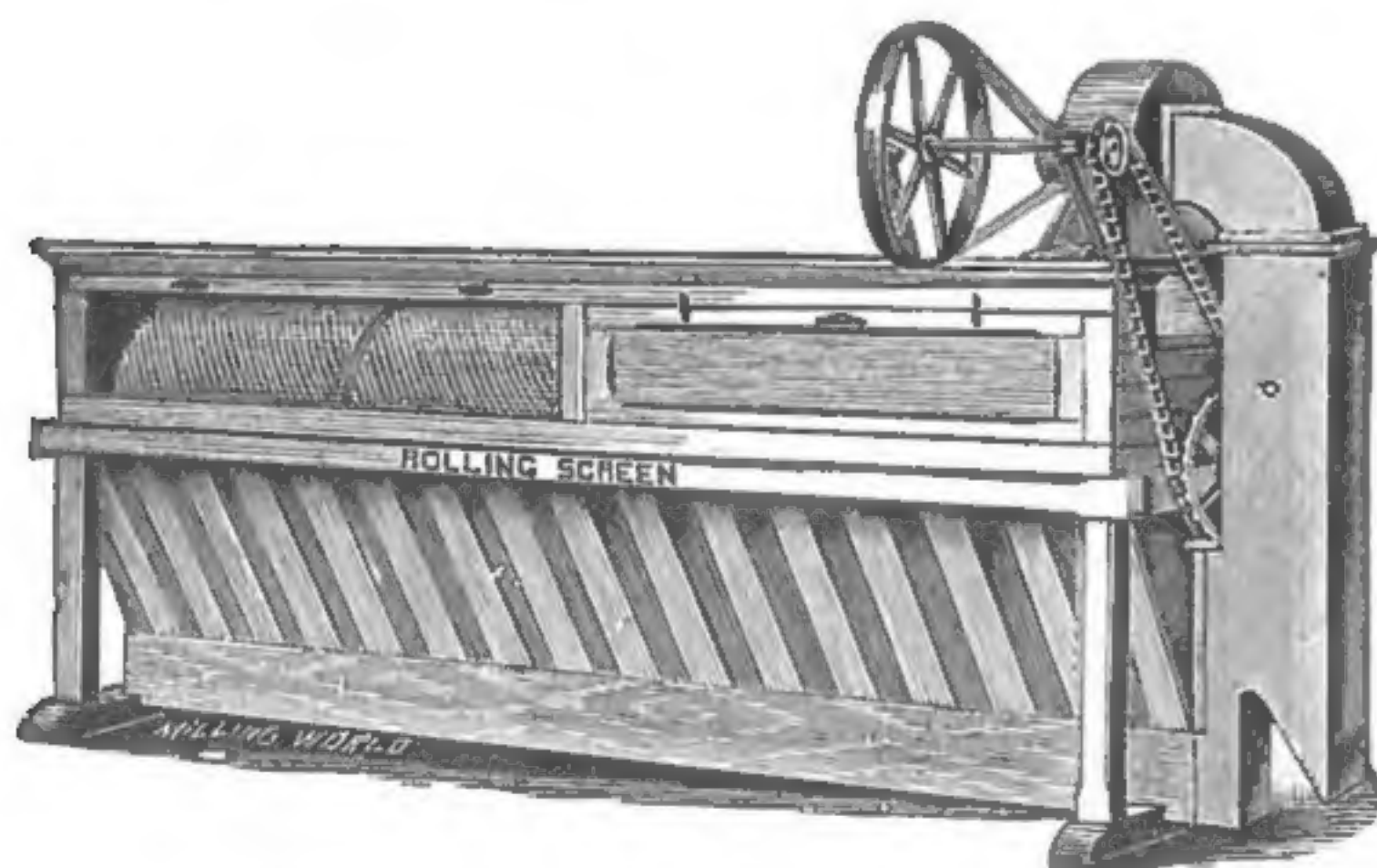
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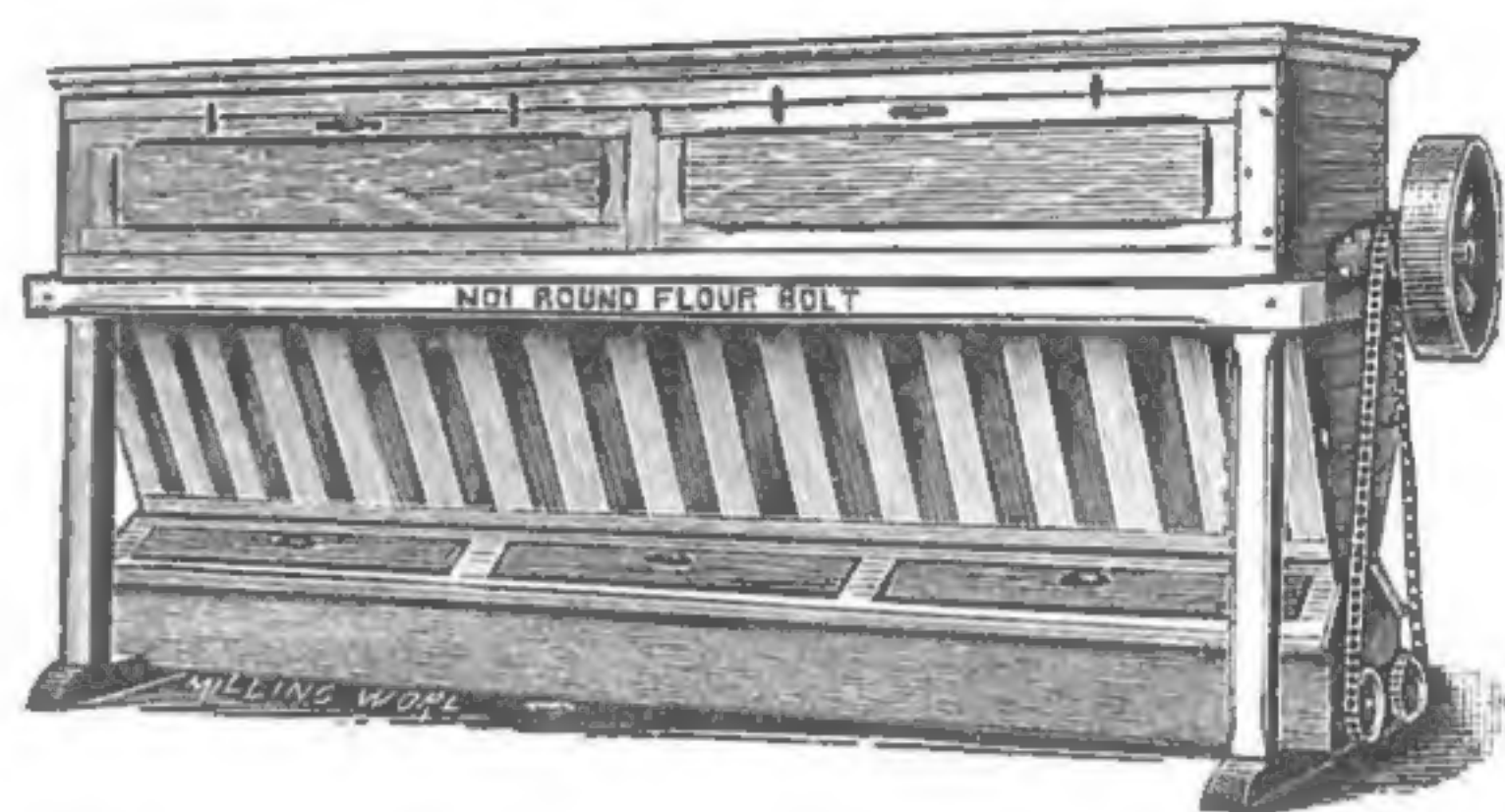
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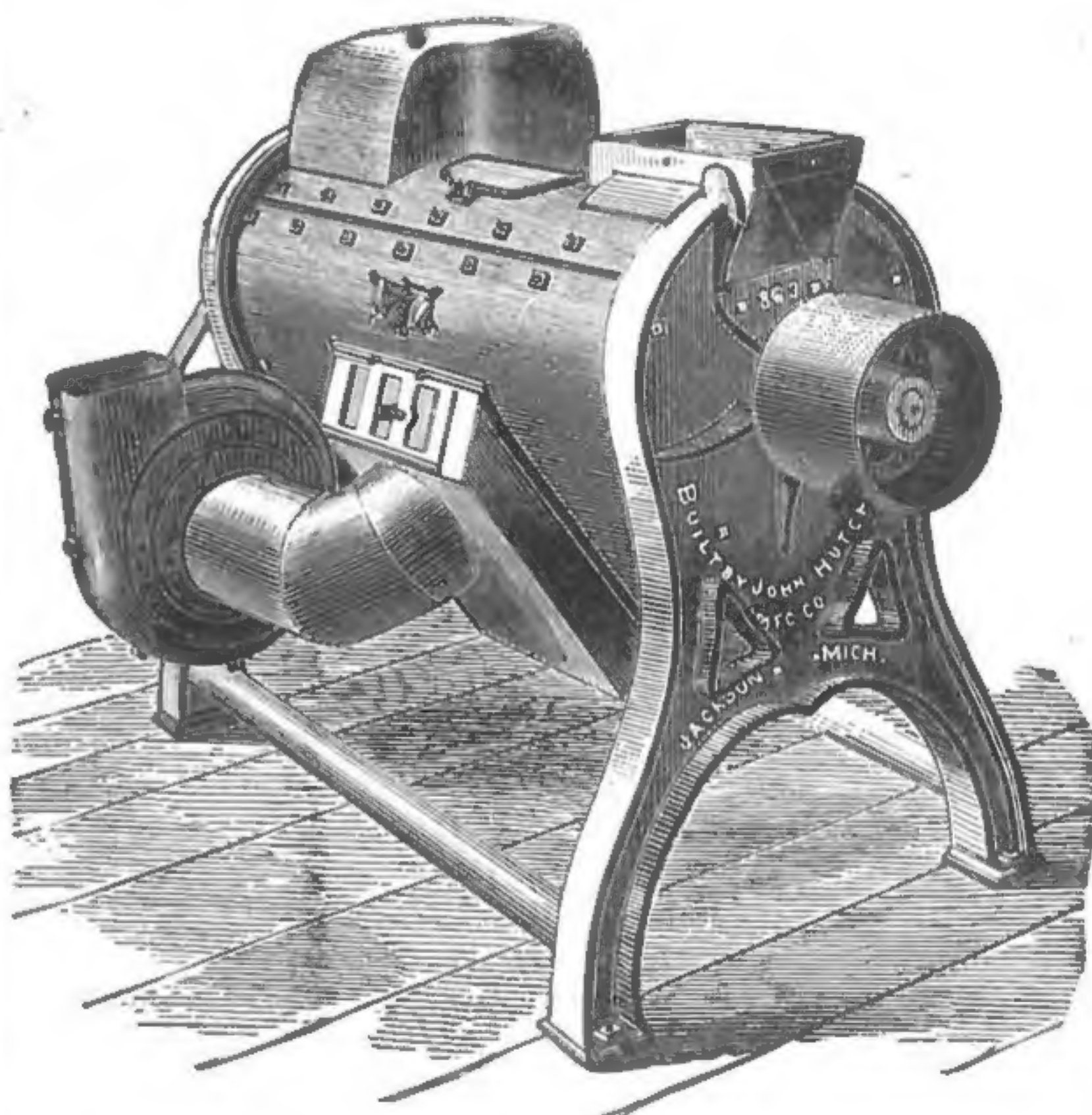


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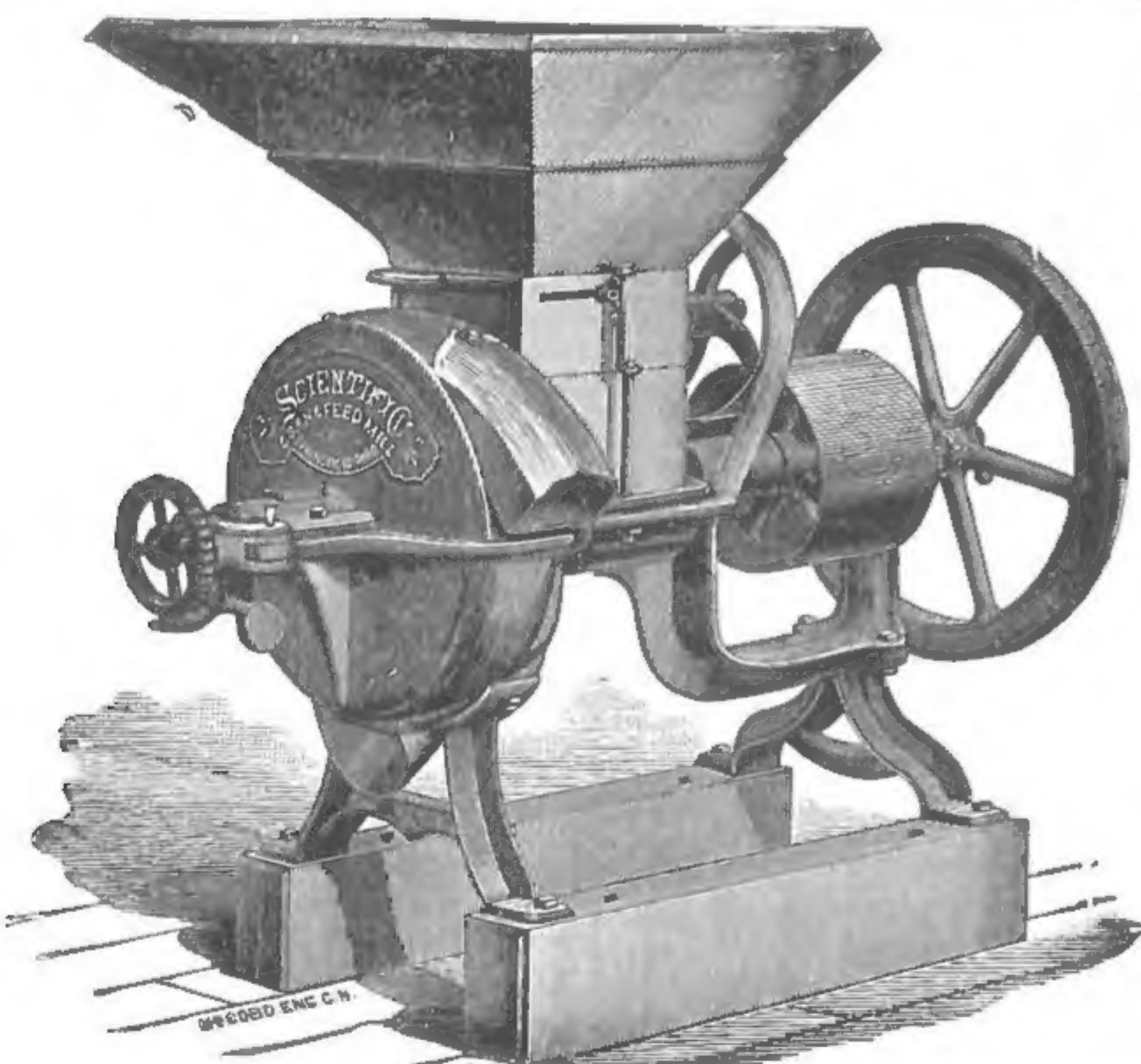
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